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To A Year's Progress In Designing Stations That Sell More Merchandise

A YEAR ago, on the cover of its annual Service Station Number, NATIONAL PETROLEUM NEWS introduced its Station of Tomorrow. It was an architect's conception—not merely an artist's daydream—of what the station of who knows how few years hence, may be like. That station was built on a draftsman's board, after much study had been given to the great progress being made in the functional style of architecture.

On the cover of this issue, in which NPN makes its annual bow to the modern, attractive and efficient stations of today, is another view of this same Station of Tomorrow. Compare it with the photographs of actual stations shown in this issue, which were selected by the chief marketing executives of many oil companies to illustrate the new types of stations they have built in the past year. You will find there is not quite so much of a jump from the practical of today to this vision of the future, as even a year ago.

In a year, oil company and station building company engineering departments have made considerable progress toward the modern style of station design which NPN's covers illustrate. And if the experiments that are now being made in the use of plastic blocks show the commercial practicability of this entirely new building material, which can be translucent, transparent or opaque, as one may desire, NPN's Station of Tomorrow may soon come to life, in its pages, in photographs of oil company stations, actually built and serving motorists.

Oil companies today are building new stations and rebuilding old ones because they recognize that obsolescence of style brings a loss in business. The life of a station is not the number of years it will keep rain off the heads of operators and customers, but the length of time it will sell the most gallons of gasoline and oil and the largest volume of other products. Some companies believe they can come nearer today to evaluating how much more trade a NEW station on the same location will bring in, partly because it will be more efficient if it is up to today's standards; but mainly because it is MODERN and denotes the PROGRESS and IMPROVEMENT with which the buying public like to associate itself.

MODERN architecture and design allows the oil companies to make more efficient sales tools of their stations. Many companies look upon the cost of rebuilding stations as a sales promotion expense, like hiring more salesmen or doing more advertising to the public. Some local marketing companies have told NPN they believed this was the most practical way to build up their sales.

Oil company executives will find in the pages of this issue much new data that will help them in their own plans for building and modernizing individual locations. Many station managers and architects and engineering companies contributed material and ideas for it.

So, still with one eye turned to this Station of Tomorrow, NATIONAL PETROLEUM NEWS Editorial Staff in this issue pays its respects to the great progress the oil industry has made the past year towards MORE MODERN, PRACTICAL and EFFICIENT SERVICE STATIONS.

NATIONAL PETROLEUM NEWS

VOLUME 32 WEDNESDAY, MARCH 6, 1940 NUMBER 10

Know Your Cost of Marketing, That is Solution, Says Eckert

S. D. Eckert

COLUMBUS, O., Feb. 29.—More complete knowledge of marketing costs is the answer to the "unsettling influences" troubling the oil marketer today, according to S. B. Eckert, Philadelphia, vice president of Sun Oil Co., speaking Feb. 28 at the annual convention here of Ohio Petroleum Marketers Assn.

Mr. Eckert included in his list of "six of the most generally cited abuses" such practices as sales to service station tankcar buyers at prices less than those quoted to jobbers or agents, "excessive margins" to resellers permitting them to give it away, too-wide differential between prices at branded and unbranded stations, and "the ridiculously low price" to commercial tankwagon buyers.

Each of these, he said "represents an effort on the part of the supplier to undersell the market without affecting the market structure," adding, "It cannot be done for long."

Mr. Eckert emphasized that the oil industry is in a constant state of change, with good practice today becoming outmoded tomorrow.

"For instance," he continued, "it was thought that the minimum spread under which a dealer could operate was 3.5c to 4c a gallon. Today, however, we find that 2.5c is the average in large metropolitan areas, and that with a proper set-up a dealer should make from 2c to 3c per gallon on products and services other than gasoline, such as tires, batteries, lubrication, spark plugs, etc., and, what is more, by carrying on this rounded-out business he is in a better position to meet price wars in one or the other of these fields. He is also in a better position to combat cut-price artists who depend entirely on volume to make their stations pay."

Mr. Eckert paused to explain that by the words "proper set-up" he meant that the station must be well-kept and have the

(*Continued on page* 27)

Missouri Jobbers Ask ICC To Probe 'Conniving' Charge

JEFFERSON CITY, Mo., March 4.—Missouri Independent Oil Jobbers' Ass'n., in a bulletin to members, urges that they write to the Interstate Commerce Commission asking an investigation of "the conniving that we believe is going on between the major oil companies to lower short haul rates and hold up the long haul rates."

"It is rumored," the bulletin adds, "that a deal was made between the railroads and the major oil companies whereby the railroads would leave present long-haul rates stand and would reduce the short-haul rates from pipeline terminals, in return for which the major oil companies will refuse to supply truck transporters from their pipeline terminals. We do not have the proof on this latter 'understanding' but events seem to point to its being substantially correct," the bulletin states.

The Missouri jobbers' bulletin chides the Missouri Pacific Railroad for its "failure" to go through with planned reductions in freight rates from the southwest into the midwestern territory, and suggests that members petition the ICC for an investigation of freight rates and to make them equitable for the small shipper. Members are also urged to write their congressmen.

* * *

Pipelines and Majors Deny Jobbers' Charges

By Teletype

TULSA, March 5.—Charges of "connivance" between major oil companies and the railroads in connection with petroleum rail rates hurled by Missouri Independent Oil Jobbers Ass'n. early this week were labeled as "groundless" by major oil and pipeline company officials.

"There's no basis whatsoever for the M.I.O.J.A. outburst," one pipeline company representative said.

"If they've the proof of such connivance, and they admit they haven't, why don't they put that proof before the Department of Justice," another major company executive said.

Major oil company officials pointed out that short-haul rates from pipeline and marine terminals in the north are higher than any other point of supply. "We've the highest short-haul rates in the country," they said, "and obviously there'll be trucking from those terminals if rail rates are not cut."

"I suppose the independent refiner in Oklahoma and Kansas, connived, when he obtained

(*Continued on page* 24)

Radio Is Effective, Says Ickes

By Teletype

WASHINGTON — Describing the Interior Department's radio broadcasts before the House Appropriations Committee, Secretary Ickes said:

"I know of no more effective and economical method of securing the public cooperation essential to congressional policy and legislation than through this medium."

South Carolina Diversion Move Killed by Court

COLUMBIA, S. C., March 5.—The South Carolina Supreme Court late last week ruled that the act providing for the diversion of $2,000,000 from the highway fund to the state's general fund was "invalid and unconstitutional."

The state had proposed a highway bond issue of $1,546,000, proceeds of which would go into the treasury, and an outright transfer of $454,000 from the highway fund to the general fund.

In ruling that revenue collected for a specific purpose could not be diverted to an entirely different purpose, the court added, however, that "it is, of course, not questioned that in any year the legislature could impose gasoline taxes or motor vehicle license fees as part of the taxes to be collected for the ensuing year, with which to meet the current expenses of the state for that year."

In view of the fact that the court's decision will confront the general assembly with a deficit of $2,000,000, fear has been expressed that an increase in the state gasoline tax (now 6c) would be asked, in line with the section of the court's ruling quoted above.

High Court to Rule On Truckers' Hours

By Teletype

WASHINGTON, March 5.—U. S. Supreme Court has agreed to review the case in which American Trucking Assns., Inc., is seeking to have Interstate Commerce Commission take jurisdiction over working hours of *all* trucking employes. ICC has held its jurisdiction extends only to driving employes, so others are subject to the work-week of the Wage-Hour Law (42 hours), instead of the 60-hour work-week permitted by ICC regulations. Case was appealed by ICC after A.D.C. Court held it should take jurisdiction over all employes.

Supreme Court Will Decide Soon On Ethyl Jobber Licensing Plan

N. P. N. News Bureau

WASHINGTON, March 4.—U. S. Supreme Court will probably rule within the next several weeks on the legality of the Ethyl Gasoline Corp.'s jobber licensing system under the Sherman anti-trust law.

Case was argued last weeek before the high court on the appeal of the Ethyl corporation from the ruling of a federal district court at New York City that the jobber licenses were in restraint of trade, in violation of the Sherman Act.

Dean G. Acheson, arguing for Ethyl, recited the history of the development of lead-treated motor fuels, and contended that the jobber licenses are based on the corporation's method and fuel patent, rather than on the fluid patent, although, he said, the government had based its case on the fluid patent alone. The government contends that mere ownership of the patent for tetra-ethyl lead fluid does not give the corporation the right to control sale of lead-treated motor fuel which contains only a small percentage of such fluid.

Stresses Health 'Safeguard'

In his argument, Mr. Acheson stressed the necessity for controlling the use of lead-treated gasoline from a health standpoint, pointing out that, following a "lead poisoning" scare in 1924 the Surgeon General had directed that regulations be promulgated governing its sale. Subsequent to this he said Ethyl developed its own safety department which has functioned efficiently since that time, and asserted that the "health question" is at the very bottom of Ethyl's regulation policy.

Also, he said, the rules upon which the jobber licenses are based are aimed at protecting the good will of the Ethyl product by protecting the fuel against deterioration, substitution, dilution, etc.

In connection with the various types of patents, he said, the method patent involves the use of fuel treated with lead, and asserted that under this patent "we have a right to license every motorist in the U. S." who uses leaded fuel.

Mr. Acheson said there was no evidence in the stipulation of facts (on which the case was originally argued) showing that there was any control of the price of the product, as alleged by the government. Also, he said, there is no mention anywhere in the stipulation as to refusals to grant jobber licenses, adding that there had been cases where such license applications were turned down because of "business ethics" of applicants, and for other reasons.

Arguing for the government, Anti-trust Chief Thurman Arnold made an "economic" argument, scarcely touching upon the legal aspects of the case. He said the government does not challenge the validity of Ethyl's patents, but its use of them.

The government's case, he said, was based on three causes:

"What is the extent of the control exercised by the Ethyl Corp., and what is its effect on the rest of the trade; how do they justify the privilege granted by patent ownership, and are its privileges being abused?"

Mr. Arnold pointed out that control of Ethyl was held by Standard Oil of New Jersey and General Motors, "who have combined to control 85% of all the gasoline which can be effectively used in automobiles." He charged that this control "put into effect an old NRA code, with embellishments of their own."

He said the effect of the combination was to bring about development of the high compression engine, and added that the fact that they had not exercised their alleged right to license all motorists apparently was cited in an effort to show what "benevolent despots" they were.

Charges Jobber Control

Getting to jobber licenses specifically, Mr. Arnold contended that through these licenses the corporation was able to completely control a jobber's business, even to the extent of determining whether it might change his source of supply, since the government counsel said, if a jobber decided to change his source of supply he would have to get a new license, which could be withheld at will by the Ethyl corporation.

As to the contention that licenses were limited to "ethical jobbers only," Mr. Arnold said this was "absurd," because it was definitely aimed at price cutters on the theory that price cutters were "unethical."

Answering the health argument, the Anti-Trust Chief said there has never been a single case of lead poisoning from the handling of this motor fuel."

As to the Surgeon General's regulations, he said the only thing the Surgeon General was interested in was the "lead" sign on the pumps. Even this, he said does not give a warning against poisoning or any dire consequences except ". . . use as a motor fuel only."

"I should think," he said, "that everyone driving into a filling station would wonder what else it could be used for."

'Needed to Control Refiners'

In discussing Ethyl's contention that the jobber licenses were necessary in addition to the refiner licenses, in order to keep the refiners from selling a leaded fuel to unlicensed jobbers, Mr. Arnold opined "apparently defendant looks at these large major refiners with the same jaundiced eye that the Anti-Trust Division does."

Mr. Arnold made a half dozen or more references to the Madison Oil Case appeal, which is still pending before the court, during his argument on the Ethyl case.

Justices Frankfurter and McReynolds were not present for the argument, although Mr. Justice Murphy, who was attorney general during a part of the pendency of the litigation and Mr. Justice Reed, who was solicitor general during such pendency, participated.

Licensing for 'New' Pollution Included in Bill as Passed

N. P. N. News Bureau

WASHINGTON, March 4. — The House has passed the Barkley stream pollution bill, passed last year by the Senate, but with an amendment which gives the federal government power to check any "new" pollution through licensing new operations. The amendment declares unlicensed discharges of new sources of pollution to be against the public policy and "a public and common nuisance" and provides for suits against any such "new polluter."

The House also accepted its Rivers and Harbors' Committee amendment eliminating outright grants from the measure, and providing for loans to public bodies and industries for the elimination of pollution (NPN Feb. 28, page 17).

As it now stands the bill still retains the "co-operative" aspects of the original Barkley measure, as to loans although the licensing provisions were attacked on the floor as changing the character of the measure in that it gave unrestricted authority to the Public Health Service which could withhold licenses for new operations of a potential polluting character without hearings, and without the right of appeal for those involved, except under operation of the injunction processes in the courts. The licensing provision was sponsored by Rep. Mundt (S.D.), who has put himself on record as being in favor of a strict federal control measure, rather than the "co-operative" approach provided in the measure as passed.

The bill now has to go back to the Senate for concurrence in the House amendments, and it is believed possible that Mr. Mundt's amendment may be rejected in the upper house, resulting in a conference committee being appointed to straighten out differences in House and Senate versions.

Manville Made Sales Manager Of National Refining

CLEVELAND, March 5.—National Refining Co. announces that, effective March 1, C. W. Manville has been appointed general sales manager of that company.

Mr. Manville had been with Shell Oil Co., Inc., since 1929 and for the past four years had been division manager for Shell's central division with headquarters in St. Louis. Prior to his connection with Shell, Mr. Manville had been with the Indiana Standard for about 5 years. He is a graduate of Massachusetts Institute of Technology.

Jones Named Chief Counsel As L. L. Stephens Retires

N. P. N. News Bureau

CHICAGO, March 2.—L. L. Stephens, general counsel for Standard Oil Co. of Indiana for the past 12 years, reached retirement age March 2, but will continue as advisory counsel until Dec. 31, 1940, President Edward G. Seubert has announced. Buell F. Jones, senior general attorney, has been advanced to the position of general counsel.

In relinquishing the responsibilities of general counsel, Mr. Stephens begins to taper off a lively career, which included ranching, politics, and Army life, as well as law. When he joined the Indiana company's legal staff in 1924, he had established a notable reputation in law and public life in South Dakota. Born in Iowa, he migrated to South Dakota when that state was still part of the frontier. After adventures in ranching and merchandising, he studied law and took up practice in Pierre, S. D. in 1901. Entering politics, he later served as mayor of Pierre and as a state senator. He was an infantry captain in the A.E.F. during the World War, and in 1923 was elected state commander of the American Legion.

Mr. Stephens directed the famous "cracking" patents case, which was successfully terminated in 1931. He was also prominent among those who served as counsel in the Madison oil case.

Mr. Jones, a native of South Dakota, has been a member of Indiana Standard's legal staff since 1930. He served as a captain during the World War, and as attorney general of South Dakota for three years. In 1929 he was republican candidate for governor of his home state.

Virginia Kills Truck Measure

RICHMOND, Va., March 4.—Virginia's legislature closes, by statute, on March 9. As of today the status of various oil industry bills follows:

1. H 406, giving cities and towns authority to route and regulate tank trucks, killed by House committee. Companion Bill in Senate, still in committee but unlikely of passage because of shortness of time.

2. Anti-diversion amendment to constitution (SJR 6), approved by Senate, and likely to be acted on this week by House Roads Committee. Latest vote of committee resulted in deadlock.

3. S 163, providing for calibration of tank trucks now on floor of Senate as amended. Action expected this week.

4. Price posting bill (H 471), killed by House General Laws Committee after truckers and others appeared against it.

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First, study your own copy of the 1940 Annual Service Station Issue of NATIONAL PETROLEUM NEWS. As a guide to the latest trends in the design of stations, among other valuable data, it contains:

Thirty photos and plans of modern stations built by oil companies. These were selected by their marketing executives for their efficiency as well as attractive appearance.

Factors that decide whether it will be profitable to rebuild a station and the amount of investment that will be justified. Complete listing of points on individual locations which oil companies study before deciding to modernize an existing station.

Design features of stations built today that aid in selling and make them more efficient in servicing cars.

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Illinois Marketers Hold 'Field Day' on Problems

15 'Experts' Take on All Questioners; Wallace Wright Is Elected President

By N.P.N. Staff Writer

PEORIA, Ill., Feb. 28.—A general "field day" on most of oil marketing's problems was held here Feb. 28 as part of the annual meeting of the Illinois Petroleum Marketers Assn. The "field day" was a further adaptation of the "panel" method of discussing a varied list of subjects before associations which have come into vogue at oil meetings the past few years.

At this Illinois "field day" instead of having just a handful of "experts" on the platform to talk to each other or answer questions from the audience or the "moderator", there were 15 "experts" on all manner of subjects sitting as the "wax works" at the speakers' table. State officials answered points on gasoline taxes, truck regulation and fire hazards, a tank-building engineer replied as to evaporation losses and oil marketers and refiners and a couple of publishers took a widely varied line of questions "catch-as-catch-can".

Russel S. Williams, Indianapolis, of Bonded Oil & Gas system, acted as "professor" with Secretary Glenn Primm assisting. "Professor" Williams had been running a "trained seal" act at the Indiana association meetings the last two years and was asked to bring his stunts with him and come to Peoria.

'Field Day' Lasts 4 Hours

While what was said on many of the subjects made good "news", nevertheless if an onlooker may comment, the variation in the program from the usual one of set speeches and papers, seemed to be the biggest news because the audience of 400 stayed the whole afternoon. They applauded Charles S. Rosenthal, Chicago, of Apex Motor Fuel Co., who called for the show to go on when "Professor" Williams suggested closing down after the men had sat for four hours on the usual small and hard "banquet" chairs of a hotel ballroom.

The audience seemed to be getting more out of the vaudeville type of program and that is the real important thing at any meeting. Such a varied and informal method of carrying on a meeting seems to make it easier for men to get up from the floor, ask questions, state their experiences and argue points.

There were two days of the usual type of program, the first one Feb. 27 devoted to members. They heard Glenn Hoffman of the Illinois Department of Labor discuss the state unemployment compensation act. And the last day there was election of officers.

Paul D. Sweney, veteran Independent oil marketer and head of one of the oldest marketing companies in the state, the Sweney Gasoline & Oil Co. of Peoria, declined to take a fourth term as president and the members elected another old timer, Wallace H. Wright, of the Crescent Gas Organizations, Inc., of East St. Louis. Charles S. Rosenthal, Chicago, of Apex Motor Fuel Co., was selected from the directorate to succeed Mr. Wright as vice president.

New directors named to succeed Mr. Rosenthal and C. O. Beroth, Chicago, Acme Petroleum Co., who retired from the board, are Karl D. Friend, Chicago, of Beck and Friend and A. L. Lake, Waukegan, of Liberty Petroleum Co., both for the 3-year term. To succeed themselves for another 3 years there were elected C. P. Poland, East St. Louis, of the Poland Oil Co., George Lofgren, Galesburg, of Lofgren-Erickson Oil Co., and Elzie Huot, Kankakee, of Baron-Huot Oil Co. G. A. Primm was re-elected secretary and Mrs. T. B. May, treasurer.

Questions 'Iowa Plan'

"Professor" Williams in opening the "field day" said that Illinois last year consumed 1½ billion gals. of gasoline and sold a total all told of $250,000,000 worth of products with the aid of 40,000 people. In the U. S., he said, despite a 6% increase in gallonage there was a 39% drop in operating profits and a drop of 90,000,000 gals. in sales of oil. Has the dealer, because he is under the "Iowa plan" and undirected as to his operations, contributed largely to this loss, he asked.

The fight of the Independent refiners and their marketer customers who do not own gasoline pipelines, was presented by Mr. Williams. To show how bitter the battle is, he said that the month after the Missouri Pacific Railroad had announced that it would reduce the oil rates from the Mid-Continent, one large oil company cut its shipments over that road from 1100 cars to 97 cars. Mr. Williams introduced M. H. Champion, traffic manager for Anderson-Prichard Oil Corp., who has been one of the leaders in the refiners fight.

Mo-Pac Telegram Read

Mr. Champion read a wire from the Missouri Pacific saying that it would not reduce, as promised, but that it would continue to "make the effort". He asked the association to join with the refiners before the Interstate Commerce Commission in fighting the investigation of the truck-compelled rates which he said from Oklahoma to Iowa now amount to 154% of the 1916 rates, on which the Independent refiners had been able to grow. Rates from major refineries, marine and pipeline terminals, in the meantime, had been reduced 35%. He said Oklahoma refiners were being taxed to make navigable streams at a cost of 3 times what railroads cost, "so we think it is only fair for us to ask that you and all others who enjoy these water route rates, help pay for a railroad rate-adjustment, if necessary, to offset our payment of that tax," he said.

J. Howard Pyle, Chicago, editorial director of Chek-Chart, told of the growing tractor market, using Illinois as an example. This state has the most tractors with 147,000, he said, running as many as 3000 and 4000 to the county, speaking only of those in farm use. These tractors with cars and trucks account for the 27% of all automotive products now used on the farms. Tractors use much fuel because they work longer hours than the average car, 800 hours a year as against 500 for the average motor car. In Illinois he estimated farm tractors now use 206,000,000 gals. of motor fuel a year, 11,000,000 gals. of oil and 3,000,000 lbs. of grease. Sixty Illinois counties have more than 1000 farm tractors each.

Pros and Cons of 'Iowa Plan' Argued by Illinois Marketers

"What about the Iowa Plan?" asked Moderator Williams.

Stanton K. Smith, Smith Oil & Refg. Co., Rockford, Ill., said they pay a 2½c per gal. commission for the operation of each station; that they give a drawing account to each man according to his capabilities, then at the end of the month after deducting all station expenses they divide the balance among the men. This is direct employment, he said, and puts the men under Social Security, but as station men need sales training and supervision this gives them also the incentive of extra pay according to their efforts.

Wallace H. Wright of East St. Louis, hotbed of strong-armed unionism, said he used to carry a machinist card and commented that to go to direct employment of men at stations that might be unionized, one found that seniority rights were liable to interfere with management.

George Lofgren said the Iowa plan is "O.K." He operates 29 outlets, visits all of them at least once a week and has a supervisor to visit them oftener. He conducts a training class every month. But he sees that competitors are operating with lower standards and that they are slipping because of lack of better operators.

Karl D. Friend, Chicago, uses one station for training and keeps 15 men there all the time and finds the "Iowa Plan" satisfactory.

'By-Passing' Bulk Plants

On the by-passing of bulk plants, Moderator Williams said it was changing the marketing picture rapidly and called on,—

Warren C. Platt of NATIONAL PETROLEM NEWS, who said this depended on the density of the gasoline gallonage; that in the highly populated districts with many cars per square mile which also happen to be near refineries, pipelines or waterways, there are increasing number of service stations of large gallonage being filled by direct delivery from refineries or large storage. Out in the smaller towns and country dis-

tricts, he said, it was not possible to attract such large gallonage to one station so some might be worth filling direct but others not. Cities, he added, are developing stations doing from 50,000 to 100,000 gals. a month and over. These large directly-serviced stations generally made for low prices. How far those low prices would extend to territory of small gallonage concentration would probably have to be determined by trial over considerable time.

"The New Illinois Oil Field and Its Effect on Marketing" was the subject given by Moderator Williams to E. G. Youngberg, Pana, Ill., of the Pana Refg. Co., one of the two plants at present in the new field equipped with cracking plant. Mr. Youngberg said that at least 60% of the gasoline from the field is being hauled in transport trucks. He said half of their gasoline they were hauling themselves and the rest was hauled by their customers. He knew of 3 trucks that haul 1,000,000 gals. a month. The field, he said, is saving the Independent marketers in that territory.

Evaporation Losses, Trucks, Illinois Refining Discussed

Brown L. Meece, Chicago, sales manager of Globe Oil & Refg. Co., said Globe is running almost 100% on Illinois crude now at its Lamont, Ill., refinery. They are about to build a new plant near Wood River, Ill., he said. The Illinois field is making competition more severe for all, like the Michigan field did. But Michigan plants got better and settled down with "crackers" to make better gasoline, until now prices are so bad, that he believed improvement was bound to come. As to rail rates, he said, Globe got no livable rail rates but had to put in its own marine terminal at Holland, Mich., and then take to its own trucking to live. High rail rates in Indiana, he believes, forced the large amount of trucking there, and many of these truckers installed dealers who cut prices and split up the gallonage. If marketers went to trucking he warned them to make long-term leases on their outlets if they would keep them against the competition of the trucking peddlers.

F. H. Mansfield, secretary of the Illinois Uniform Vehicle Law Committee of Springfield, told the marketers that the oil industry had much to say about the new truck law there and that they need not fear it. He said private carriers simply had to prove that they are up to the requirements of the traffic code and that they are financially responsible. He advised that private carriers volunteer for "Private Carrier Numbers" which they could use on their trucks and avoid probable confusion and embarrassment by having to stop otherwise and prove that they are such.

Talks of Dike Requirements

George H. Anderson, assistant state fire marshal, said that dikes are required on tanks when they are within 150 feet of buildings or where the terrain made diking desirable. However, he said, the industry should appreciate that proper safety vent valves afford 100% fire and explosion protection to properly-built tanks, especially when tanks are fitted with automatic cut-off valves inside. The state requires such fittings on new tanks but not yet on old tanks. However he recommended them for all tanks.

H. C. Connor, East Chicago, Ind., engineer for Graver Tank Mfg. Co., said the engineer today can save the average marketer his taxes by fitting evaporation saving equipment to his tankage. Stock losses he said are larger than many oil men appreciate.

His statements brought on general discussion which prompted W. L. McManus of the state's motor fuel tax division to say that, according to the tax reports, a large majority of marketing stations came within the 1½% loss allowed by the state law and that the average was ¾%.

Third Grade Talk Is Next

Moderator Williams then introduced the subject of "Third Grade Gasoline" and said he believed its use as "White gasoline" was increasing in the country districts where it is used for tractor fuel. Stanton Smith said in Rockford where they are using third grade in a fight their percentage is 20, but ordinarily in the cities it is down to 3, 4 or 5% others stated.

M. C. Hill, Chicago, of Johnson Oil & Refg. Co., said that they just did not consider third grade as an automobile fuel and let it go at that.

Jesse Werner, of Springfield, said at his station downtown third grade ran 42% while out on the road near town it was down to 36%. However, in and around his territory he said is a lot of price selling with leaded third grade advertised on signs as "tra ETHYL" thus perpetrating a fraud on the motorist who sees the "Ethyl" name when coming down the road and a cut price sign. Lessee operators, he said, are in bad shape in Springfield because they can't sell "8 for $1" and make a profit and when they offer "7 for $1" they cannot get any business.

Wallace Wright reported price signs in and around St. Louis are large and ruining business by making customers decidedly price conscious. Werner added that he found that these big cut-price signs made customers so "sign conscious" that they would bite on big signs even though they said only "6 for $1."

Moderator Williams said "don't show price signs. We don't at any of our stations nor anywhere in town."

Price Signs Cause Trouble

Chicago marketers, Rosenthal, Friend, McManus and others reported that Chicago markets and gallonage were torn to pieces by big price signs. Karl Friend said that at Christmas time he took down the price signs and put up "Merry Christmas" signs and increased his business, his customers commenting favorably on the change.

John Keeley, of the State Finance Dept., talked on the interpretation of the oil inspection law and W. S. Dolen and L. M. Moss on the motor fuel tax law.

Floyd Maddox, assistant secretary of the Illinois Petroleum Industries Committee and assistant to Secretary Primm, told of the spring organization of county tax committees against a forthcoming special spring legislative session and a probable flood of anti-oil industry tax bills.

Brown Hits Venezuela Pact

By Teletype

WASHINGTON, March 5.—Russell Brown, general counsel of Independent Petroleum Assn. of America, urged the Senate Finance Committee today to take action to "undo the wrong which had been done to the domestic petroleum industry" and to "discontinue the valuable special privileges" granted to a few companies by reduction of the oil import tax in the Venezuelan trade agreement. Mr. Brown seeks to have the committee prohibit excise tax reductions in trade treaties. An amendment providing such prohibition has been introduced by Senator McCarran, Nevada.

A. S. T. M. Will Hear Papers On Lubrication Developments

By Telegraph

By N.P.N. Staff Writer

DETROIT, March 5.—Many standards and tests for materials used in oil refinery equipment are among those being considered seriously here this week at spring meeting of the American Society for Testing Materials.

By noon today, 250 had registered for participation in 100-odd committee meetings scheduled for this week; close to 500 are expected to register before end of week.

Among papers to be presented at a symposium on new material in transportation on Wednesday is one on "Developments in Lubrication," by J. P. Steward, R. C. Moran and C. M. Reiff, Paulsboro, N. J., of Socony-Vacuum Oil Co. It strikes at possible prejudice in the use of additives in lubricating oils, pointing out that additives long have been in common use in greases.

Use of soap to provide necessary plasticity so that leakage would be minimized was described as "probably the first example of an automotive lubricant cut to fit a given need by addition substance foreign to petroleum. The necessity for additives in gear oils and crankcase oils has resulted from the desirability of employing higher pressures, avoiding corrosion, sludge and lacquer formation, improving pour point and viscosity index it is brought out.

The authors give particular attention to an additive developed by Socony-Vacuum having an extremely complicated organic base which was said to lend itself readily to chemical alteration or tailoring to give the response desired in any particular oil and for any particular service condition. The authors conclude that "the phrase oils are made, not found appears still to be true".

TULSA, Feb. 26.—A new laboratory building, in which will be designed and manufactured all geophysical apparatus required by the Standard Oil Co. of New Jersey and its subsidiaries, will be constructed in Tulsa by the Carter Oil Co. Cost of the building and equipment will be approximately $100,000.

The Editor's Page—

Readers Comments and Opinions will be much Appreciated by—WARREN C. PLATT, Editor and Publisher, Penton Building, Cleveland, O.

We Salute the Progress In Marketing

The emphasis on lower costs in oil marketing and more sales per dollar of investment and expense, is increasing rapidly.

That is shown by recently-announced policies of major oil companies to institute station training schools, to speed up and subsidize construction of modern stations and the installation of modern equipment. It also is shown by the facts as to unprofitable outlets that are being gathered by larger oil companies and, what is more, that are being acted upon. Unprofitable outlets are being abandoned and long, costly truck routes given up more than ever before. Salesmen are being held to profitable quotas—profitable to the companies—or are let out.

This greater swing to more efficient operations is also shown by the reader's inspection of the Gallery of Modern Service Stations in this annual Service Station issue of NPN. A comparison of these smart new stations with those of a few years ago shows the great distance down the road of modernity that oil companies have come. Such a comparison also shows the great way that those oil companies who have lagged on this road, will have to come in the next few years if they would catch up with profits.

While this is a Service Station issue and buildings are the things illustrated, it can also be said that these new stations in this Gallery are equipped with the latest of equipment, particularly with that equipment that will help in the SELLING, not just in servicing to motorists.

The March of Progress is in full swing in oil marketing and we commend the pictures of it in this annual Modern Service Station Issue.

★ ★ ★

Plan Full Marketer Representation

The American Petroleum Institute, in reviving its Marketing Division, has a real job cut out for itself.

There is much doubt and skepticism in the minds of many a marketer as to whether Independent marketers are going to get any chance to sit in the seats of the mighty. The last time they tried to get together in public with the representatives of the majors was at the inauguration of the late code in 1933. Then they were crowded off the seats of power and never did get a first-hand voice in the main committee at Washington, even after a president of a then none-too-well authenticated dealer's association was placed on the famous "P. & C." Committee.

With the effort to revive the A.P.I.'s marketing division under E. V. Weber, president of the Ohio Petroleum Marketers Assn. and vice president of the A.P.I., come the first announcements of committees that prompted Paul D. Sweney, retiring president of the Illinois Petroleum Marketers Assn., to state to his membership in annual meeting at Peoria, Ill., last week, that, judging from the make-up of the announced committees, "the same old gang are still taking all the offices." He said he was much disappointed.

The committee announcements as made hardly did justice to the efforts and aims of the men who are bringing this marketing division back to life. The district chairmanships were given to major and "semi-major" men while the "program committee," which will steer the character of all meetings, consists of four lawyers and three operating marketing men, though one of the lawyers also heads his company's marketing department.

The dominance of the legal profession on this committee can hardly be wondered at considering the way the major oil companies have been attacked and are threatened with still more attacks by the New Deal at Washington.

Even with all these lawyers in charge, the safety of their companies might well be questioned, in view of the Madison case being the outgrowth of the industry's own code activities and the recent indictments in California being the result of the companies, on the advice of counsel, trying to operate under an old "consent" decree as well as trying to take advantage of California's more recent price maintenance law, a law that President Roosevelt has been personally much against. Two more attacks are threatened, while a federal grand jury investigation on the East Coast, has been hanging fire for several months, and all these are under the Department of Justice. In addition the Federal Trade Commission has refused to consider an oil industry code proposed several years ago.

The extent to which anything can be discussed or action taken at these proposed marketing meetings of majors and Independents, and not be attacked by an administration seeking to build up as much of a "public case" against the industry as possible to get through the Roosevelt-Ickes oil control bill, is a serious legal question.

However, we know that Vice President Weber and the other men active in rejuvenating this A.P.I. division plan to give full representation on the district committees to Independent marketers as well as major company executives, in order to make the meetings as representative of the industry as possible. In fact to succeed at all, this rejuvenation must include most generously representatives of the active marketers associations.

Then in addition to representation on all committees, it is planned to have all meetings open to all in the marketing industry.

The new Division of Marketing, if it can be carried through as planned, should be of great value to Independents and majors alike and it would seem that there certainly must be some things that even a suspicious Department of Justice could not object to American business men talking about.

Bigger Crowds at State Meetings

The greatly increased attendance at state oil marketers meetings this year shows not only a commendably healthy interest in state associations but it is evidence of a growing strength of Independent marketers.

State association meetings report even twice their normal attendance. There seems to be more active participation in debate of more marketing and industry subjects. There is also a broadening of views of these associations as they express their opinions on national subjects, such as freight rates, truck-hauling regulations and the New Deal's oil control bill.

All told it is a healthy sign for those who attend these meetings and for the whole industry, for this greater interest indicates growth, in appreciation of competitive conditions, in determination to meet those conditions intelligently and in a decision to go ahead and to grow. There appears to be less talk about overcoming operating shortcomings by law and more talk of doing it by getting better equipment and methods and using them more effectively.

There should be a still greater revival of state associations, as they have a most important place to play in the welfare of the marketers as well as in the life of the whole oil industry.

OIL TAX NEWS

Dumps at Company Stations Declared Not 'Distribution'

SEATTLE, Wash., March 1.—The Washington state supreme court has reversed a lower court decision which held that Union Oil Co. of California must pay the gasoline tax on the amount of gasoline withdrawn from its bulk storage and delivered to its company-operated service stations.

The state had contended that the gasoline tax was an excise levy upon the distributor for the privilege of engaging in such business, with the tax measured by the number of gallons distributed.

The company's contention, which was upheld in a five to four decision of the state supreme court, was that the mere transfer of the gasoline from its bulk storage to its service stations was not taxable under the statute.

On this point, the court ruled, "there has been no sale or use, nor was there a distribution, as appellant (Union) could not distribute to itself." It is clear, the court stated that "the gasoline was not sold or used by the appellant; therefore, unless the gasoline was distributed by appellant within this state, the tax claimed may not be exacted."

Union had paid the tax on the amount sold by the service stations, and had paid tax on 151,017 additional gallons under protest. This amount was delivered to its stations in excess of the amount sold, the difference being the result of evaporation, stock handling, or other causes, including the quantity remaining in service station tanks. Court also ordered the return of taxes paid under protest. (Case was decided Jan. 29, 1939, and was numbered 27379.)

Connecticut Files Tax Suit To Test Shrinkage Allowance

NEW YORK, Mar. 4.—Marketers operating in Connecticut are watching with interest the test case of Connecticut gasoline tax law in which Fair-Chester Oil Co. of Port Chester, New York, selected by oil interests as representative, is defendant.

Writs have been served on Fair-Chester Oil Co. and have been accepted by their attorneys, W. J. Mulligan; Robinson, Robinson and Cole; and Spellacy and Yeomans. Case is expected to go to court within two months at the latest.

The point at issue in the suit is whether the 3c gasoline tax should apply only on the amount of gasoline actually sold or used by distributors, or on all gasoline received in the state.

The law states that distributors shall pay tax on "number of gallons of fuels sold or used in this state." The state contends, however, that the section allowing a discount of one per cent to cover "expense of collecting such tax and loss by reason of shrinkage" makes the tax a receipts tax.

Action similar to Connecticut's was decided in favor of the state recently by Louisiana supreme court. (N.P.N. Jan. 24 page 19)

California Dealers Meet

N. P. N. News Bureau

LOS ANGELES, Mar. 2. — Modern merchandising equipment and methods will be featured at the sixth annual convention and exposition of the California Retail Petroleum Dealers Assn. at the Elks Club here, Mar. 6 to 8. Three afternoons and one evening will be devoted to open forum discussions of retail marketing practices in the petroleum industry.

'Gas' Tax Collections Up

TALLAHASSEE, FLA. — Florida's 7c gasoline tax brought in $2,555,271 in January, State Comptroller's Office reports, about 10 per cent more than January, 1939, total of $2,321,710.

COLUMBIA, S. C. — South Carolina gasoline tax collections in 1939 were 9 per cent above the 1938 total, officials report. The 6c tax brought $12,582,314 last year and $11,530,176 in 1938.

Brave Cold Weather To Attend Meetings

N. P. N. News Bureau

WASHINGTON, March 6.—More than 1,000 North Carolina oil men braved some of the worst weather in the state's history to attend eight district meetings sponsored by North Carolina Petroleum Industries Committee throughout the state in late January and February.

The meetings, all of which took up the question of highway fund diversion, highway transportation, proposed legislation in Congress and projected legislation at the 1941 session of the state legislature, also brought together the leaders in allied organizations such as the State Grange, The Travelers Protective Assn., United Commercial Travelers, Rural Letter Carriers Assn., North Carolina Automobile Dealers Assn., the N. C. Truck Owners Assn., as well as city, county and state governments. Meetings were held at Winston-Salem, Charlotte, New Bern, Edenton, Rocky Mount, Durham, Southern Pines and Wilmington.

Around THE MID-CONTINENT

. . . By ALLEN S. JAMES

To Bring Will Rogers Home

A group of Oklahomans — among them several oil men — flew to Los Angeles to lay before his widow tentative plans to return the body of the late Will Rogers to his native state and county.

After hearing the plan Mrs. Rogers gave her consent and the famous cowboy humorist's body will be reinterred in a crypt to be constructed on the hillside near the beautiful Will Rogers memorial near Claremore, Okla., in Rogers county.

The crypt will be constructed of concrete and native stone or marble. The only entrance will be through a bronze door. Construction costs have been underwritten by individuals from private funds—and it is believed in many quarters that a goodly portion of those funds are coming from oil men who knew and loved Will Rogers so well.

Gov. Leon C. Phillips headed the party which made the trip to the West Coast. The party flew there and back in Ed H. Moore's airplane, and Mr. Moore was one of the party. Others making the trip were Lew Wentz, millionaire oil man of Ponca City; and vice chairman of the Will Rogers memorial commission; N. G. Henthorne, commission chairman and editorial manager of "The Tulsa World"; Ewing Halsell of Vinita, treasurer of the commission; John Mabee, Tulsa oil man; R. L. Crutcher, McAlester banker, and John Duncan Forsyth, Tulsa architect and designer of the beautiful memorial at Claremore.

The memorial is located on a 25-acre tract on a hill overlooking Claremore. The land was obtained by Will Rogers shortly after his marriage as the site of their future home — but the world called him and he never got around to building the home there.

* * *

"Uncle" Jim Brazell is 72

"Uncle" Jim Brazell of Oklahoma City had quite a birthday party the night of Feb. 29. It was his 72nd birthday and pilots from all parts of Oklahoma flew to the capital city to help him celebrate.

The pilots were there because "Uncle Jim" is the nation's oldest licensed pilot. He did not decide to do his own flying until he was 60, but since that time he has flown his own ship wherever he has gone.

Oil Transportation News

Latest developments in freight rates, legislation, regulations, and new construction affecting transportation of petroleum products by truck, barge, tanker, pipeline, and railroad.

'Clean' Tankers Drop 1c Lower, 'Dirty' Rate Up

N. P. N. News Bureau

NEW YORK, March 5.—"Clean" bottoms from the Gulf to North Atlantic ports were fixed at slightly lower prices, according to reports in the boat market last week.

Fixture of a "clean" ship at 64 cents a barrel for gasoline, 67 cents for kerosine and 70 cents for light fuel, is down approximately 2 cents a barrel from the rates which held from the opening days of January, well through the third week of February, and are one cent a barrel under the fixture made late in February.

Reports in the boat market were that a charter could probably duplicate the latest fixture reported above for additional tonnage.

The sluffing off of "clean" boat prices, traders say, is a reflection of the absence of demand for bottoms for transportation for light heating oil. Boats chartered for this trade now, would not be back to the East Coast until around the end of March, or early in April—too late to do much good for the 1940 heating oil season, which will be on the toboggan at that time.

"Dirty" boats, on the other hand, were reported well held, with a fixture of 30 gravity crude or fuel at 54 cents reported last week. Another fixture of 61 cents per barrel for 10 gravity crude or fuel also was reported to have been done last week. One trader said there was not sufficient "dirty" tonnage to take care of present demand.

South American Trade

Tanker rates for off-shore movement of products from South and North American ports continued uncertain, and varied from charter to charter. For example, and indicative somewhat of prevailing rates, three "dirty" ships from the American Gulf to the west coast of Italy were fixed from Feb. 27 to 29. These boats were done at $13.25, $13.50, and $14.00 per ton.

"Clean" tonnage from Aruba, S.A. to Sweden was reported fixed at 43 kroner, or approximately $10.25 per ton.

L-C-L Rates to be Cut In the South

By Teletype

WASHINGTON, March 5.—Interstate Commerce Commission has granted southern railroads and common carrier truckers authority to cut less-than-carload and less-than-truckload rates on petroleum products in the South by approximately 40 per cent. Rails filed tariffs early last year making the reductions, but they were suspended by ICC on complaint of truckers. Later, trucks filed tariffs containing similar reductions, on theory that if rail cuts were allowed, they would be met. ICC investigated justification for both cuts in same proceeding, authorizing both.

Rail-Oil 'Deal' Denied By All

(*Continued from page* 17)

reduced short-haul rates from his refineries recently," one major official countered. "It's just as silly for them to make such charges against us when we attempt to get reduced rates from our terminals," he added.

It was pointed out by pipeline-shipping refiners that reduced short-haul rates from northern pipeline and water terminals had been approved by Western Trunk Line Committee, but the cuts apparently were being held up pending consideration by southwestern rails.

"We don't object, nor will we stand in the way of reduced long-haul rates from the southwest," another large refiner said, "and we told rail shippers that at the Chicago hearing on reduced rates from our terminals."

"There's no foundation for such reports," a rail executive who has spent much time considering the Missouri-Pacific proposal declared when advised of the charges.

Rails May Join With Truckers In Joint Rates

N. P. N. News Bureau

WASHINGTON, March 4.—If American railroads — members of the Assn. of American Railroads—accept the recommendation of AAR's board of directors and rescind their resolution against railroad-truck rate and route tie-ups, the Department of Justice may abandon its anti-trust suit against them.

The rail association's decision (which, of course, hinges upon the member-roads' approval) to enter into joint rate and route agreements with trucks and buses, was a development of late last week, and, while justice department would not officially comment, it was learned that such a decision, if approved, would probably be considered a "cure" for the situation against which the department attacked in filing its suit in federal court here last October.

Of course, the department might hold out for a trial of the case, in which the railroads are charged with violation of the anti-trust laws—because of their alleged refusal to co-operate with motor carriers—and thus get a court decree restraining the rails from any resumption of the allegedly trade-restraining practices.

Another possibility is that the rails, having "cured" the practices complained of by the department by publication of the joint rate and route agreements, may offer a "consent decree" proposal, which might be acceptable to the department.

In any event, acceptance of the recission by the rails will undoubtedly open the way for a new attack on the problem, both from the standpoint of the motor carriers and the justice department.

WASHINGTON, March 6.—U. S. Maritime Commission has approved application of Standard Oil of California to sell the tanker *Capt. A. F. Lucas* to the Balboa Transport Corp., Colon, Panama, which involves transfer of registry from U. S.

Sohio Starts New Line

CLEVELAND, March 4.—Construction of Sohio Pipe Line Co.'s new 12-inch crude line from Hagerstown, Ind., to Lima, Ohio, has been started, the company announces. New line will connect with the line from Stoy, Ill., to Hagerstown, and will enter Lima from the southwest, tying into Standard of Ohio's refinery at Lima and the Buckeye Pipe Line Tank Farm.

Shell Builds Blending Plant

HOUSTON, Tex., March 4.—Shell Petroleum Corp. is constructing a $100,000 ethyl blending plant at its Deer Park refinery near here. The additional blending equipment, officials said, was made necessary by the recent changes in the company's two top grades of motor fuel.

Magnolia Adds Refining Units

BEAUMONT, Tex., March 4.—Magnolia Petroleum Co., subsidiary of Socony-Vacuum Oil Corp., is planning the construction of a reforming and thermal polymerization unit at its refinery here. The new unit will be the final installation in a modernization and enlargement program which has been under way for almost two years.

ICC Calendar

DECISION

Harry E. Grimes, Arkansas City, Kans. (MC-1149) Permit granted for operation as a contract carier of petroleum products from Arkansas City, Kans., to points in specified counties in Mo., over irregular routes.

HEARINGS

John Herman Groner, Jefferson City, Mo. (MC 101255) March 19, Kansas City, on contract carrier application to transport petroleum products in Okla., Kans., and Mo.

Hugh M. Tawney, Bryan, Ohio. (MC 95228, Sub. 1) March 21, Cleveland, on application to extend operations as a common carrier of fuel oil in Ohio, Ind., and Mich. over irregular routes.

Frei Transport Co., Marysville, Kans. (MC 50246, Sub. 1) March 26, Lincoln, Nebr., on application to extend operations as a contract carrier of petroleum and products in Kans. and Nebr. over irregular routes.

Bunnell Oil Co., Hastings, Nebr. (MC 1116, Sub. 1) March 26, Lincoln, on application to extend operations as a contract carrier of petroleum products in Kans. and Nebr. over irregular routes.

Nelson Bros., Inc., Colorado Springs, Colo. (MC 100749, Sub. 1) March 26, Denver, on application to extend operations as a common carrier of petroleum products in Colo. and Wyo. over regular and/or irregular routes.

Newspaper Editors Blast Ickes For His Attack on Truck Drivers

WASHINGTON — Truck drivers have plenty of friends among motorists, judging from newspaper editorial comment on Interior Secretary Ickes' attack on trucks before the annual convention of the American Automobile Assn. here several months ago.

Samplings of newspaper comment on Secretary Ickes' speech, in which he expressed a longing to drive down a "truck-infested road in the biggest armored tank that I can find and bumping these pests from the road, regardless of where they may light," have been compiled in a 28-page pamphlet by American Trucking Assns., Inc., and captioned, "Ickes Sticks His Neck Out" (see cut in adjoining column).

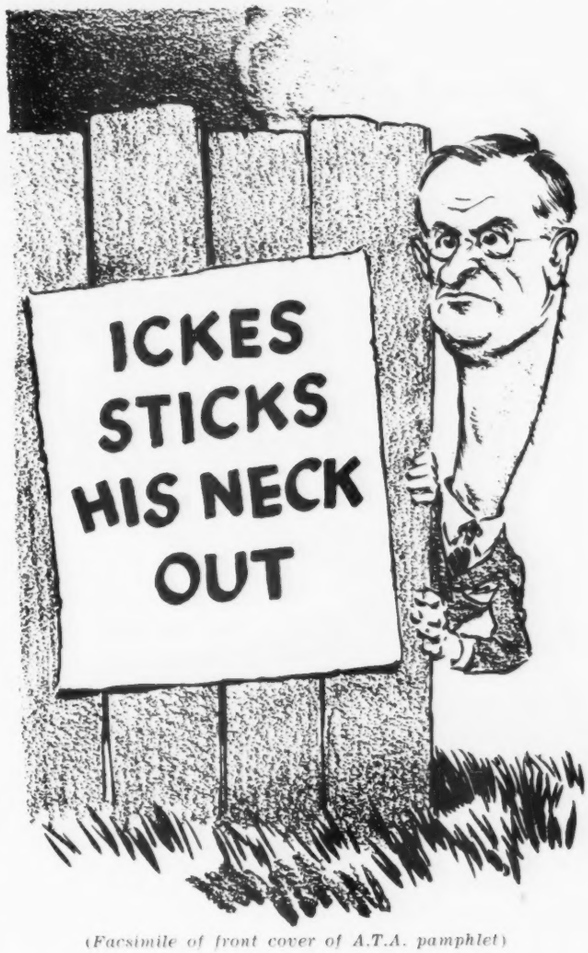
Nearly all of the newspaper comment, the A.T.A. compilation reveals, calls attention to the reputation of truck drivers for careful and courteous driving; many cite instances of truck drivers stopping to help motorists. Heavy taxes paid by trucks is another frequently-mentioned point. Secretary Ickes is criticized as "peevish" and his statement called, "Just another Ickes bid for publicity."

Truck drivers themselves, it seems, can hurl epithets. For example, the *San Diego Union* quotes one as saying: "A deliberate appeal for murder of truck drivers on the highways can only come from a mind softened with senile decay. The statement could be expected from a twisted demagogue, not from a responsible man in a high government position. . . We do not know why a man representing the United States government should advocate our destruction."

"Typical of the New Deal attitude toward business," is the view of the *Wakefield (Mass.) Item*, which goes on to say, "Mr. Ickes' tirade ill befits a cabinet member who wouldn't have a job but for the overtaxed industries of America which, according to the White House pattern, he goes out of his way to insult."

On the West Coast, the *Seattle Times* "apologizes" to truck drivers, adding, "Mr. Ickes is wrong. He always will be." The editorial concludes: "It is our unanimous belief that the average truck driver is the finest driver on the road. He is certainly the most courteous and kindly. If other classes of drivers behaved half as well, it would cut traffic casualties in half. Don't take Mr. Ickes too seriously. The rest of us don't."

But truck drivers have no need to fear Ickes, according to the *Indianapolis News*, which comments: "A man who always has a foot, and sometimes two feet, in his mouth, could not really operate an armored tank properly."



(Facsimile of front cover of A.T.A. pamphlet)

Prefacing its remarks with, "Quite in line with precedent Mr. Ickes has spoken out of turn again," the *St. Louis Globe-Democrat* proceeds to cite facts and figures to prove the safety record of truck drivers. Similarly, the *Beaumont Enterprise* says Ickes "is about as accurate in his denunciation of truck drivers as he is in criticizing the press of the United States." Then the Texas paper gives a "sermon" on why the truck must be—and is—the safest driver on the road.

Typical of the friendly attitude of many newspaper editors toward truck drivers is the following excerpt from an editorial in the *Washingtonian*, or Hoquiam, Wash.:

"We've been driving an automobile a score of years and can, contrary to what Mr. Ickes says, testify that the truck drivers are among the best, most careful and most courteous drivers on the road. Many a time they have waved us a hand inviting us to pass them when they could see the turn ahead and we couldn't. We've seen them pull off the highway to give a string of cars behind them a chance to pass their slower moving vehicle.

"Fellows that do that don't deserve to have someone threaten to drive them off the highways 'with armored tanks.'

"But, truckers, don't get sore at poor 'Honest Harold.' He is a chronic dispeptic who is sour on the world. He isn't happy unless he is knocking somebody. Truckers, your shoulders are broad. Let the old gentleman have his good time by knocking you. If he wasn't knocking the truck drivers he would be knocking someone else."

Single copies of the pamphlet, entitled, "Ickes Sticks His Neck Out", may be obtained free by writing to American Trucking Associations, Inc., 1033 16th St., Washington, D. C. Prices will be quoted on quantity lots.

NPN's Log

On Oil Legislation

Oil legislative information, summarized below, is based on reports received at Cleveland from Washington and state capitals which are deemed reliable although NATIONAL PETROLEUM NEWS assumes no responsibility for the accuracy or completeness of this information.

STATE BILLS

Kentucky

S-241, Attkisson.
To provide for reciprocal agreements with other states whereby motor vehicles owned by residents thereof may operate in the state without payment of certain fees and taxes.

Mississippi

H-497, Shanks et al.
Amends 1936 law to provide that state tax forfeited lands may be purchased by original owner for 10% of the taxes and other costs accrued at date of sale and to prohibit resale for 2 years, during which time the state shall retain one-half interest in oil, gas and mineral rights. To Public Lands Committee.

HR-19, Wallis et al.
Resolution providing for investigation of practicability of levying and collecting sales tax from wholesalers and distributors. To Rules Committee.

H-421, Patridge.
Levies transaction tax of 1% on conveyances of real estate, timber, mineral, oil or gas rights or any interest therein. To Ways and Means Committee.

New Jersey

ACR-10, Kerner.
Proposes constitutional amendment to prohibit diversion of gasoline taxes, registration and drivers license fees. To Judiciary Committee.

A-179,180, Shell; A-234,236, Hanna.
Increases state aid for roads. To Municipalities and Appropriations Committees.

New York

A-37, Rapp.
Creates committee to study highway transportation by motor vehicles. To Ways and Means Committee.

A-1795, Giordano.
Requires installation of shut-off valve to prevent overflow of fuel oil on oil burners used for heating dwellings. To Cities Committee.

S-1403, Bewley.
Same as A-1724. Provides that for motor fuel tax purposes, persons selling diesel motor fuel shall keep records of all sales and make reports to the Tax Commission. To Taxation Committee.

Rhode Island

H-788, Anthony.
Increases width of motor vehicle limit from 102 to 106 inches. To Judiciary Committee.

S-157, Potter and S-160, Chaffee.
Constitutional amendments prohibiting diversion of automobile and gasoline taxes. To Special Legislation Committee.

Virginia

H-471, Yates.
Prohibits sales of petroleum products at less than certain "established prices." To General Laws Committee.

Changed Status

New York

A-1288, Whitney.
Defines diesel motor fuel for tax purposes, to mean kerosine, crude oil and motor fuel commonly used in operation of diesel type engines. Reported favorably in Senate.

Virginia

SJR-24, Walton.
Advocating taxes on motor fuel in the District of Columbia. Passed Senate.

South Carolina

H-64, Graham et al.
Allows gasoline dealers to retain 2% of gasoline tax to cover cost of collection. Reported favorable in House.

Marketers Urged to Back Public Relations Plan

Benefits from Public Relations Work Described at Ohio Marketers Meeting

By N.P.N. Staff Writer

COLUMBUS, O., Feb. 29.—Public relations in the oil business are just as vital to the dealer and jobber as to their supplying companies—more so because the smaller enterprises with less capital reserve are more directly affected by the reactions of the public "whose good-will is the source of our prosperity," said H. H. Anderson, St. Louis, vice president of Shell Oil Co., Inc., speaking before Ohio Petroleum Marketers Assn. which closed its 17th annual convention here today. Mr. Anderson, who is a member of the American Petroleum Institute's public relations administrative committee, spoke Feb. 27.

"All of us," said Mr. Anderson, "are most sensitive to 'bad news' because, unfortunately, that has the greatest news appeal.

"Politicians and malcontents have taken advantage of this human frailty and are making it necessary for oil men to unite solidly in a determined effort to improve our public relations. Subversive interests have laid a barrage of false information about our business. Disintegration, increased taxation and government control rear their ugly heads on many sides. Our great industry is all too frequently cast in the tragic roles of political football, tax-spenders' 'fat cat' and bureau scapegoat.

"Perhaps an over-publicized internal strife lays us open to such attacks. If we have some dirty linen to wash, let's wash it; but let's do it in the laundry and not in the front yard. No one has respect for a family that seems continually to fight amongst themselves. Noisy groups amongst us should hush their magnification of the shortcomings of a few, and join the majority in chorus to bespeak the good deeds of the many," Mr. Anderson said.

Keep House In Order

He emphasized that good public relations meant simply "having your house in order and inviting the public to inspect it."

"A few unethical or misguided units," he continued, "may bring the whole industry into disrepute. No successful business man is any longer a rugged individualist. Consideration, cooperation and compromise now take precedence. That which affects favorably or unfavorably any one part or branch of our industry will affect us all, small or large. Only through recognition of our partnership in a joint task can we attain lasting good-will."

He then explained why the public relations campaign should be carried through to dealers and station employes as they are direct contacts with the public. Satisfied employes are the basis of sound public relations, he declared, urging the marketers to make their employes "feel they are partners to your success and they in turn will sell the customers and keep them sold and happy."

"Good-will must start with you—good-will to your employes; good-will to those who supply your products; good-will to the industry; good-will to your customers. Remember, good-will is public relations in its most attractive dress," he concluded.

Hoyt Ogram Speaks

Speaking on the importance of the independent oil jobber Feb. 28, Hoyt R. Ogram, Chicago, of Kanotex Refining Co., declared that it was up to the independents to take the lead in setting up uniform marketing practices.

H. H. Anderson

But he counseled against rushing to legislators for cure-alls and penalties on "aggressors." Such a course, he added, will only bring a cross-fire of regulation upon ourselves and our competitors, courting the danger of government regimentation."

Opening the afternoon session of Feb. 29, a motion picture entitled "Oil From the Earth," was shown through courtesy of Shell Oil Co., Inc., followed with a talk by Mr. Anderson, Shell vice president, on the Illinois oil fields. He told how production has jumped, bringing Illinois within several thousand barrels of Oklahoma, third ranking oil producer of the U. S.

Panel on Marketing Problems Features Last Day's Session

Feature of the final session, Feb. 29, was a panel discussion of marketing problems by three professors from the College of Commerce, Ohio State University—Drs. H. H. Maynard, T. N. Beckman and H. C. Nolen. Observations of these 3 professors on 5 points may be summarized as follows:

TRUCK TRANSPORTATION—Marketers should make the most of the truck's inherent advantages but watch out for anti-truck legislation, study their costs to make certain trucks are cheaper than rail movement, and expect retaliatory moves by the rails, such as rate cuts.

JOBBER'S FUNCTION—Jobbers who try to cut costs by getting their dealers to take 1000-gal. dumps are shirking one of their jobbing functions, namely, the storage of products. This may have short-term advantages but in the long run it is "suicide" for the jobber because the dealer, with such a large storage, may turn to buying direct from the refiner himself.

COMMISSION AGENTS—This was regarded as an attempt to eliminate some functions of the jobber—such as full responsibility for servicing retail outlets, extending credit and local advertising—which has a tendency toward price cutting. From a social standpoint, it is of questionable merit because, if the jobber's functions are needed, then someone has to perform them.

CONSUMERS RESELLING—This practice is uneconomic and can be stopped by pointing out to the concern involved the "do-as-you - would - be-done-by" rule.

PRICE COMPETITION—Low prices based on facts are economic and in the public good; but price competition due to ignorance of costs or due to a desire to drive competitors out of business is bad. Fair competition laws, such as the Robinson-Patman Law and others, are aimed at eliminating "predatory price cutting" but there still remains the marketer who doesn't know his costs and sells at prices that are ruinous to himself as well as his competitors.

Other Speakers Listed

Other speakers included Dr. Robert Williams, president,

Weber Heads O.P.M.A.

COLUMBUS, O., Feb. 29.—Eric V. Weber, Cincinnati, of Eureka Oil Co., was re-elected president of the Ohio Petroleum Workers Assn. at its 17th annual convention here. It will be the ninth term for Mr. Weber, who is an independent marketer selling under his own private brand.

Sam Bohlen, Orrville, of Snyder Oil Co., was re-elected first vice president; C. L. Hartenfels, Mansfield, of Lexington Oil Co. was elected second vice president, and John J. Klay, Lima, of Parks-Klay Oil Co., third vice president. Also re-elected were Robert A. Warfel, Columbus, executive secretary and treasurer; Hubert B. Fuller, Cleveland, general counsel; and Clyde E. Wallingford, field secretary.

Mark E. Hazen, Medina, and J. Roger Day, Edgerton, were elected directors; W. J. Loufman, Cleveland, of Fleet Wing Corp., was re-elected a director. Holdover directors, besides the above officers, are: C. A. Carroll, Xenia, of Carroll-Binder Co.; Robert M. Clark, Columbus, of The Preston Oil Co.; J. R. McElroy, Fostoria, of Seneca Oil Co.; W. S. Munson, Bristolville, of Bristolville Oil & Gas Co., and John Stevens, Genoa, of Stevens Oil Co.

Re-Elected President

E. V. Weber

Ohio Northern University, who spoke Feb. 27 on "The Significance of This Day for Business;" and Harry M. Rugg, Detroit, automotive engineer, Pennsylvania Grade Crude Oil Assn., who repeated the speech he had given a few weeks previous at the Kansas and Kentucky conventions on "Improvements in Lubricating Oils during the Last Few Years." Speeches by S. D. Eckert, Sun Oil Co. vice president, and R. A. Ludlow, New York, director of the American Petroleum Institute's lubrication committee, are covered in separate articles on this and subsequent pages.

A round-table discussion was held the morning of Feb. 28 by the A.P.I. regional public relations committee for Region No. 10, presided over by Mr. Everett from the Institute's New York office. Victor H. Scales, New York, the A.P.I. public relations director, was also present.

Re-Elected Secretary

Robert A. Warfel

Study Marketing Cost, That's Key, Says Eckert

(*Continued from page* 17)

proper equipment to make the most of "other-than-gasoline" sales.

Discusses Bulk Plants

Instead of "by-passing of bulk plants," Mr. Eckert said it was "rather a matter of reduction in the number of bulk plants or an increase in operating radius from the most efficient bulk plant locations made possible by improved road conditions and more efficient truck equipment." Cost is the controlling factor, he added.

Mr. Eckert said he feared that many marketers have confused the practice of making specific concessions to dealers taking truck-train deliveries with a true economic study of bulk plant locations.

Truck Delivery Costs Cited

Sun Oil Co.'s total cost of tankwagon delivery from its Columbus, Ohio, warehouse, which has about a 25-mile circuit, was something under 0.25c per gallon in 1938 and probably a little lower in 1939, he said.

"If therefore, the cost were cut in half, it would save only 0.125c per gallon," he added. "When, therefore, we hear of allowances being made of 1c or even 1.5c per gallon, it is just simply a price cut and should be treated accordingly." He pointed out that this cost figure was based on Sun's handling only one grade of gasoline, but said that even if the cost were doubled, with 2 or 3 grades, it would be "far short of the 1c or 1.5c so often allowed."

His parting advice on marketing problems was this:

"Don't hope for some code or truck legislation to come along and help you in your problems, just go along and help yourself. Always remember that when it comes to making rules to help you, the other fellow is at the same time asking for rules to his liking and these might hurt you badly.

"Just take any imaginary situation and draw up rules that would give you the protection that you would like and if they are not based on economics I will show you how within a short time you would be moving heaven and earth to have these regulations removed."

Next, he discussed the various rules in the voluntary oil marketing code pending before the Federal Trade Commission, saying that some were already covered by existing statutes, others were unworkable because of loopholes, and others unenforceable.

Says Code Wouldn't Help

"I cannot see, therefore," he added, "that a code would help any of us unless it were the fellow who did not sign up—so it looks like we were back to economics and free enterprise."

Mr. Eckert touched briefly on the Cole Bill for federal oil control, declaring that it would interfere with the Interstate Oil Compact and state laws which are now regarded as operating successfully. He concluded with a discussion of government control in general—price fixing and the like, which he said would thwart progress.

Lists 'Unsettling Influences' That Trouble Oil Marketers

The six "unsettling influences" troubling oil marketers today, as listed by S. B. Eckert, Sun Oil Co. vice president, in his speech to the O.P.M.A., follow, together with his comment:

Margins

"1. Disruption of markets due to excessive margins allowed to resellers, both wholesale and retail, which permits the passing on of part of these margins to the customer.

"The cost of distribution has been reduced far more rapidly than the margins allowed for this service, and the excess has been passed on to the dealer to make it possible for him in turn to cut markets. The slow closing up of over-all spread between crude costs and price of finished products to consumer will ultimately correct this error.

Dealers Buy at Tankcar

"2. Allowing service station chains and so-called distributors to pick up gasoline at supplier's bulk plant without proper compensation for the operating cost of such facilities.

"Thus the distributor is given a tankcar price at supplier's bulk plant, but his only expenses are sales costs and tankwagon delivery—let us say 0.5c per gallon, whereas he is allowed from 1.5c to 2.5c. You know what happens to this excess spread.

Points Out Jobber's Function

"3. Sales of gasoline to service station tankcar buyers at the same price offered to jobbers or agents."

This is a failure, he added, to "recognize that the jobber must carry on the entire responsibility of the supplier in his marketing territory (advertising other than national, sales contacts, social obligations, etc.), whereas the service station tankcar buyer has only to offer his wares in a market prepared and maintained by the supplier."

Unbranded Differential

"4. An attempt to maintain a differential between unadvertised and branded gasolines far greater than the cost of advertising or the added drawing power of the branded motor fuel."

The differential, Mr. Eckert believes, should be "just enough for two similarly located and equipped outlets—one selling branded and the other unbranded products—to build up equal gallonages."

"For some unknown reason," he continued, "the unbranded dealer believes that he has a right to sell 4 or 5 times as much gasoline, justifying this increase on the decreased spread that he must take. The answer, of course, is that if he can get away with it it may be profitable for him to give away an extra 0.5c or even 1c and thus obtain 3 or 4 times the volume. The ultimate result, of course, is the tearing down of the market structure. Had both branded and unbranded dealers applied economic principles both would be doing satisfactory gallonages and both making fair profits.

Stations Leased for $1

"5. Lease of service stations to dealers at $1 per month, or lease from a dealer at one rental and return at a much lower figure.

"This again is nothing more than a reduction of the tankwagon market through a subterfuge and should be treated as such."

Hits Commercial Prices

"6. The ridiculously low price quoted to commercial tankwagon buyers where in many instances the consumer has been able to buy in tankwagon in dumps smaller than those taken by the average service station at 0.5c or more below tankcar or as much as 2 or more cents below the tankwagon market.

"Let us grant that the dumps are larger," said Mr. Eckert, continuing his comment on the

economics of commercial deals, "let us say that advertising of product is of no assistance in obtaining this class of business and let us admit better credit risks and less sales costs—add all of these savings together and you will reach about 0.5c per gallon below the cost of dealer business. What is the answer? The supplier is apparently willing to take less for his product.

"I always marvel at the fact that it is the man who does not have this business that is emitting the loudest wails. It seems to me that the squawks should come from the man who is saddled with it. As for my company we take it only when it is profitable as compared with service station business. The answer is that less than 1% of our business is commercial," the Sunoco official said.

Mr. Eckert then stated his opinion that knowledge of marketing costs was the answer to these conditions. "We should make careful cost analysis of our own business to see which types are profitable and which are running at a loss," he said.

"We should analyze these losses to see if they are due to poor operation. If your competitor can do the job for less, you must improve your operation or get out of that line of business. If you find that you cannot make money even with efficient management you should leave this field to those so-called major companies who seem to have an interest in volume only. Analyze your position with regard to supply—available markets and your chances of favorably competing in these markets—then go to work and do the job better and cheaper than anyone else can do it," he said.

A.P.I. Lube Committee's Plan Explained to Ohio Marketers

COLUMBUS, O., Feb. 29. — Seven objectives of the American Petroleum Institute's lubrication committee were outlined today to Ohio marketers at the O.P.M.A. convention here in the first public statement by R. A. Ludlow, New York, program director of the Institute's lubrication committee. Mr. Ludlow emphasized, however, that the program has not yet been approved by the A.P.I. marketing committee.

The seven-point program, as outlined by Mr. Ludlow, was:

1. To afford means of co-operation with the automotive and other industries in matters pertaining to lubricants and lubrication.

2. To foster sound policies in the merchandising of quality lubricants.

3. To promote in general the interests of all connected with the manufacture, distribution and utilization of lubricants.

4. To promote the study of arts and sciences of lubrication through the gathering and dissemination of information relating to lubricants and lubrication.

5. To inform motor car owners of good practices in the use of automotive lubricants.

6. To inform automobile manufacturers of the physical and chemical properties of lubricants and of the economic considerations applicable to the utilization of automotive lubricants.

7. To inform automobile service departments of the advantages of promoting proper lubrication regularly.

Discusses Drain Intervals

Mr. Ludlow also discussed the trend toward longer intervals between crankcase drains, which he attributed in part to improvements in engines and lube oils but in greater measure to service station operators shortcomings in merchandising. He told the oil marketers that their station operators had a duty to inform their customers as to the effects on their cars of too-long intervals between drains and the protection afforded by frequent and regular changes.

R. A. Ludlow

Up to 1925, motorists changed motor oils at 500-mile intervals, he said. From 1925 to the early 1930s, the drain interval lengthened out to 500-1000 miles; in 1936, it was 1547 miles; and in 1938, 1772 miles.

He pointed out that, for the average car owner, the difference between draining the crankcase at proper intervals and letting it go unchanged until the engine's efficiency was endangered, was only a matter of a few dollars annually. He quoted figures showing the alleged saving by motorists who infrequently change oil. Even at the top of the scale—motorists changing at 10,000 miles—the "saving" was only $9 per year.

Connecticut Oil Convention Draws 450, Despite Weather

BRIDGEPORT, Conn., Mar. 4. —The theme, "Justice for Automotive Transportation," of the fourth annual convention of the Connecticut Petroleum Industries Committee here, Feb. 28, might well have been, "Justice for Automotive Transportation —Through Cooperation."

Pleas were made for better co-operation between the oil industry and the highway departments, between wholesaler and retailer, and between the oil man and the legislator.

Other highlights of the convention were attacks on diversion of highway funds and governmental control of the industry.

Despite unfavorable weather, which forced cancellation of a previously-scheduled early morning program, about 450 oil men were present for the banquet and speeches.

Importance of oil's influence on legislation and the most effective way to go about asserting that influence was discussed by Senator George T. Culhane, Waterbury, in his speech, "The Legislator and the Oilman."

Oil Supplies 33% of Taxes

Sen. Culhane brought attention to the fact that 33% of Connecticut's income is derived from taxes on petroleum.

"With such a tremendous benefit to the state, surely oil has something to say about the way its government operates," he said. Mr. Culhane declared that if each oil company co-operated with its retail outlets, kept them informed as to what was harmful legislation and what was not, and if each gasoline station operator "talked" with his friends and customers, "No legislator in the United States could stand against their united requests and protests, if they were reasonable."

Urges Co-operation

L. V. Butterfield, American Oil Co., brought out his point quickly, "We're not in this business because we like somebody," he said. "We're in it because we want to make money, and the way to make that money is to co-operate."

In speaking of the relationship between wholesaler and retailer, he stated, "Few of us have been on both sides of the fence. Some of us have been on one side, and some of us have been on the other. I have been on both sides, and I know what you dealers say after sugges-

DEATHS

Herman L. Bachmann

Herman L. Bachmann, 70, who retired from Mid-Continent Petroleum Corp. a year ago due to ill health, died at his home in Tulsa Feb. 29. He had been an employe of Mid-Continent for almost 22 years.

* * *

J. D. Vance

J. D. Vance, 58, retired oil operator and a resident of Tulsa for more than 50 years, died at a Tulsa hospital Feb. 29. His first job in the oil industry was that of a tool dresser in the Red Fork fields in 1909. It was the Red Fork field that started Tulsa toward its international reputation of being the oil capital of the world. Vance also was a drilling contractor and then a superintendent for the Phillips Petroleum Co.. until 1930.

* * *

John McNeil

John McNeil, vice-president and director of Imperial Oil Ltd., died March 3, at Vancouver in the course of a business trip. Mr. McNeil had been associated with Imperial Oil's marketing department since 1906. He was elected director in charge of marketing in 1931, and vice-president in 1934. Funeral will be held in Toronto, March 8.

tions and criticisms have been made to you by your suppliers. You say 'Phooie.' I'm here to tell you that when the oil companies spend their time in research developing these suggestions to which you say 'phooie,' they are not doing it just to waste money."

Mr. Butterfield suggested that dealers take time and consider criticisms made by the oil companies rather than being quick to condemn policies which they have never given a trial.

Pleads for Better Understanding

Chairman George A. Quigley of the newly formed Retail Gasoline Dealers Ass'n. of Connecticut urged a better understanding of the problems of the gasoline dealer.

"The 500,000 men daily pumping gasoline in the U.S. are in a business of vicious competition, and although they are one of the most important parts of the oil industry, they are the least organized and the least understood," Mr. Quigley said.

'Primarily In Tax Business'

E. L. Cleveland, assistant head of Socony Vacuum Oil Co.'s tax department drew a laugh from the oil men during the afternoon session when he justified his remark that the oil industry was a "Servant of the State" by saying, "We seem to be primarily in the tax business, and only secondarily in the oil business."

He pointed out that state tax authorities have the least trouble and the least expense in collecting the approximate 35% of the state's money, which is derived from taxes on petroleum.

R. D. Lynch, of Newgate Oil Co., next talked on "America's Biggest Little Industry," in which he showed the important part the Independent individual and partnership plays in the business of producing, refining and marketing oil.

"There are by far more individuals than companies and more partnerships than corporations in the industry," he said. He spoke of the progress oil has made in the past few years, and warned of the threat common to all successful businesses. "As progress is made, others try to take over what a lot of hard work has accomplished," he added.

Dealer's Viewpoint Given

Interesting light was thrown on the viewpoint of the gasoline dealer by H. E. Warner of the Stamford dealers association. Mr. Warner said he had been questioning dealers for the past two months in order to determine what viewpoint, if any, they held.

"I was amazed to see how many of them there were whose minds were in a complete fog," he said.

Mr. Warner urged the oil companies to develop a viewpoint for the dealer, or to at least give him help in developing one of his own. He quoted one dealer, a college graduate, whose viewpoint he said was "ideal," quoting the dealer as saying "I want to conduct my business so that I can merchandise myself, my place of business and my product in such a way that the motoring public will compensate me enough to stay in business and to have enough left over to live comfortably and to enjoy the good things of life."

An appeal for a constitutional amendment in Connecticut to prevent diversion of highway funds was made by R. E. MacCleery of the Highway Users Conference.

State Highway Commissioner, William J. Cox concluded the program with a brief history of the four types of roads in Connecticut, the state's plans for the future improvement and construction of each of the four types, and the vital importance the roads have to the petroleum business.

'Gas' Stocks Reach 98,364,000 Barrels

NEW YORK, March 5.—Rising 1,645,000 bbls. in the week ended March 2, the American Petroleum Institute's estimate of U. S. gasoline stocks reached an all-time peak of 98,364,000 bbls. This, despite a decline of 45,000 bbls. in refinery crude runs and a 388,000-bbl. drop in gasoline production reported by the Institute today. Gas and fuel oil stocks continued downward.

Last previous high in the Institute's estimate of the country's gasoline stocks was 93,192,000 bbls. on March 19, 1938.

Inventories were down 64,000 bbls. in the Louisiana-Gulf district last week. Substantial additions to storage were made in all other districts as follows: Indiana-Illinois-Kentucky, 698,000 bbls.; Texas-Gulf, 277,000; East Coast, 246,000; California, 156,000; Inland-Texas, 80,000; Oklahoma-Kansas-Missouri, 71,000; Rocky Mountain, 41,000; and North Louisiana-Arkansas, 30,000 bbls.

Stocks of gas oils and distillates declined 375,000 bbls. while inventories of residual fuels were up 102,000 bbls. for a net decline of 273,000 bbls. in stocks of all gas and fuel oils.

(See page 32)

'Madison' Damage Suit Filed By 8 Independent Marketers

MINNEAPOLIS, March 2.—Another treble damage suit arising out of the Madison oil cases has been filed in U. S. District Court for Minnesota, Fourth Division. Suit, asking treble damages amounting to $1,630,510, bases its complaint on "all of the facts and acts of conspiracy charged in the (Madison) indictments".

Suit, brought on behalf of 8 oil marketers, lists 12 oil companies as defendants, all of which were defendants in the Madison oil cases. Complaint alleges defendants "conspired" to fix tankcar gasoline prices and require uniform jobber contracts; it relies on "facts and acts" of the two Madison cases.

Plaintiffs in the suit are: Hanson Oil Co., Burlington, Wis., Indianapolis Filling Stations, Chicago, Mayer Oil Co., Monroe, Wis., Inter-County Oil Co., Abelmans, Wis.; Menominee Oil Co., Menominee, Wis., Olson Oil Co., Miltown, Wis., Citizens Independent Oil Co., La Crosse, Wis., and Cook Brothers Oil Co., Menominee, Wis.

Defendants are: Barnsdall Refining Corp., Shell Petroleum Corp., Standard Oil Co. of Indiana, The Pure Oil Co., Sinclair Refining Co., Phillips Petroleum Co., Socony-Vacuum Oil Co., Inc., Skelly Oil Co., Continental Oil Co., Cities Service Oil Co., Deep Rock Oil Co., and Globe Oil & Refining Co., (Illinois).

Complaint says that *Deep Rock was not indicted in either of the two Madison cases but alleges that Deep Rock used the same type of jobber contract and took advantage of the "conspiracy" of the other defendants alleged in the suit.

The complaint of Hanson Oil Co. charges that its margin was decreased an average of 3c per gallon on 1,653,097 gals. of gasoline sold during 1933, 1934, and 1935, amounting to $49,592, plus an additional $20,000 for alleged loss of good-will, all of these alleged damages to be trebled, if the suit is successful. Globe was Hanson's supplier.

Other plaintiffs, with amount of their alleged damages trebled and name of supplier during period covered, as set forth in complaint, follow:

Globe was also the supplier of Indianapolis Filling Stations, seeking $522,650 in treble damages, and Mayer Oil Co., asking $128,948 in treble damages. Menominee Oil Co., asking trebled damages in amount of $180,224, was supplied by Shell; Olson Oil Co., $126,660, supplied by Pure and Cities Service; Citizens Independent, $95,310, supplied by Deep Rock; and Cook Brothers, $202,866, supplied by Pure.

Davis, Michel, Yaeger & McGinley of Minneapolis, are counsel for the plaintiffs.

*Department of Justice reports that Deep Rock was indicted in both the first and second Madison cases. They were dismissed from the first indictment (price fixing) on Nov. 11, 1937.

Patman Chain Bill Gets Hearing Soon

By Teletype

WASHINGTON, March 5.—A Ways and Means sub-committee, will begin hearings March 27 on the Patman Chain Store Tax Bill (HR-1.) Committee appointed Monday, includes: Reps. McCormack (Mass.), Boehne (Ind.), Duncan (Mo.), Dingell (Mich.), Crowther (N. Y.), Knutson (Minn.), and Woodruff (Mich.)

Bill would levy progressively increasing tax on interstate chains, up to $1,000 per store for all above 500, and would multiply total tax thus computed by the number of states in which chain operates. Service station chains would be taxable under the bill unless they dealt exclusively in petroleum products and did not handle tires, accessories, etc.

Sadler To Run For Governor

By Teletype

AUSTIN, Tex., March 4—Jerry Sadler, Texas Railroad Commissioner, today "definitely" announced his candidacy for governor of the Lone Star State.

"I am definitely a candidate for governor," he told newspaper men. And one plank in his platform, he said, will be the financing of old age pensions with collections from a tax of 2.25 cents a barrel on crude oil and 1 cent a thousand cubic feet of natural gas produced in the state.

New Hearing Granted On East Texas Quota

N. P. N. News Bureau

TULSA, March 4.—The three-judge federal court which ruled recently that the current East Texas proration order was unreasonable because of its per-well allocation features has agreed to reconvene at Houston on March 14 to hear additional testimony and arguments before entering a final decree.

This means that until March 15 at least the method of distributing oil production among the huge field's 25,000 wells will not be disturbed.

The court had announced its conclusions following trial of the combined cases of Humble Oil and Refining Co. and Rowan & Nichols Oil Co. but announced it would withhold its decree pending a Texas railroad commission decision to appeal or write a new East Texas order. (NPN, Feb. 28, Page 22.)

The agreement of the federal judges to reconvene was made after District Judge R. J. McMillan of San Antonio suggested at a conference in Austin March 1 that attorneys request Circuit Judge S. H. Sibley of Atlanta, Ga., and District Judge James V. Allred of Houston to sit with him and hear terms of a proposed judgment and the state's motion—made at request of the Texas railroad commission—to stay execution of injunctions until final disposition of an appeal.

Humble's attorneys had suggested that the company be given 15,000 barrels additional daily allowable from their leases and Rowan & Nichols attorneys had sought an increase of 479 barrels daily.

Order Is Complicated

Judge McMillan decided the method by which the terms of the proposed judgment were calculated was so complex an immediate decision could not be made and suggested the three-judge court hear the question as well as the state's motion to stay the injunctions while an appeal is being taken to the U. S. Supreme court. The state had made the motion at the request of the commission, which had contended such a step was the only thing that would prevent possible disorder in the field.

The decision of the judges to reconvene came near the end of a week of hand-wringing and differences of opinion among the commissions and the usual barrage of statements.

Commissioners Disagree

Commissioner E. O. Thompson was opposed to any effort to write a new order which would meet the three-judge court's approval and was in favor of taking an immediate appeal.

Commissioner Jerry Sadler favored the redrafting of the order after a hearing in East Texas. He said he was afraid that testimony at the trial that wells could be produced profitably in East Texas with 5 to 10 barrels daily production might have too much weight with the supreme court. He wanted to get some additional evidence into the records to offset that testimony.

Chairman Lon A. Smith was first on one side and then on the other. One time he favored a hearing, and then he switched over to an appeal, he there was apparently standing when the judges said they would listen to some testimony and arguments.

This being an election year in Texas, with two of the commissioners believed to be planning to run for governor and the third for re-election to the commission, the statements issued the past week were said by many observers to have a "political" ring.

Commissioner Sadler, who recently has been referring to Gov. Lee O'Daniel as the state's poet laureate, wrote to that same governor asking him to call a special session of the legislature to enact a more clearly defined conservation statute and preferably one that would clear up some of the questions that are being raised as to the validity and the scope of the state's marginal well law.

O'Daniel Parries Sadler Query

Gov. O'Daniel parried that one neatly by replying that the three judge federal court had not held the state's conservation statute unreasonable or invalid; it had merely held unreasonable an order of the commission, and that it was the duty of the commission to prepare valid orders.

When the commission met to decide on an appeal, Sadler then announced he was not in favor of such a move. He added that he did not want to shift to the supreme court the responsibility that was the commission's.

Commissioner Thompson's statements referred repeatedly to the plight in which the "little oil men" would be plunged if the commission tried to draft an order that would meet the approval of the three-judge court. "They are asking that the little fellows be cut down to five barrels and that the commission give this extra 15 barrels to them," Thompson said in discussing the Humble's request that judgment be entered granting it 15,000 barrels additional oil daily. "And they want us to do it right now even before we have the benefit of an appeal to the higher courts. . . .

"If we had not appealed this case and had submitted to the lower court's order then the little man would be cut off forever, so far as this case is concerned."

Col. Thompson pointed out, meanwhile, that the Texas legislature which meets in January, 1941, will have before it the question of extending or revising the conservation statutes since they expire in 1941. He and Sadler have expressed the hope that the legislature will clarify the proration statutes to show specifically the extent of the commission's authority, so that considerable litigation can be avoided.

French Seek Etex Crude

The commission received, meanwhile, a request that it lift the Wednesday shutdowns in the East Texas field in order that producers could supply a demand for 65,000 to 70,000 barrels of oil daily which was reported to have been received from French interests.

Ray Starnes of Gladewater, one of the independent operators in the field, made the request of the commission. He was told by the commission to furnish it with documentary evidence, preferably in the form of purchasers' contracts.

Producers Cut Oil Allowable For California

N. P. N. News Bureau

LOS ANGELES, Mar. 2.—To offset the upward trend of inventory statistics, as indicated by a reported increase of approximately 451,000 barrels of petroleum stocks on the Pacific Coast in the first half of February, the California producers central committee set the state crude allowable for March under the voluntary curtailment program at 592,000 bbls. per day, a reduction of 2000 bbls. daily from the February quota.

Allotments for newly completed and recompleted wells were provided by reductions in the top allotment assignable to any one well from 185 bbls. per day to 182 barrels daily and also by reducing the allotment for intermediate wells above the marginal classification through a lowering of the power factor in the proration formula.

For several months reductions in the top allowable have averaged 10 bbls. per well per day. The smaller than usual reduction now made was said to be a result of the greater than average natural decline of intermediate and marginal wells.

Representatives of operating companies in the San Joaquin Valley and Coastal fields, acting through the central committee, were reported to be making progress in a plan to eliminate unnecessary drilling. No estimates were available as to the extent to which drilling might be reduced if landowners could be induced to consent to less stringent lease obligations.

Lube Shipments to Neutrals Endangered by British Ruling

N. P. N. News Bureau

WASHINGTON, March 4. — American exporters of lubricating oils to the Netherlands, Belgium, Denmark and other so-called "neutral" countries, have been advised by the British embassy here that such cargoes will not be granted British "navicerts" for safe passage, because stocks of oil in those countries are adequate, and therefore a potential source of German supplies.

The embassy advised that cessation of such shipments would save the companies delays and other difficulties, under British contraband control rules.

Lubricating oil exports from this country have shot upward like a tin can put over a cannon-cracker during the six-month period since European hostilities began.

The implication in the embassy warning was that if the companies applied for "navicerts" to cover the shipments, they would be held up so long as to amount to a rejection. If shipments were made without

"navicerts," they would be subject to contraband control regulations.

Secretary of State Cordell Hull has said he knows nothing of the situation, but if the American exporters seek some relief through the State Department, it is expected that any representations would be made to the Marquiss of Lothian, British Ambassador here.

Interior's Forecast Gets Committee OK As Oil 'Stabilizer'

WASHINGTON, March 4.—In reporting the Interior Department appropriation bill for the next fiscal year (beginning July 1), House Appropriations Committee considered protests, chiefly from independent distributors, against the monthly Bureau of Mines forecasts of demand and, in recommending their continuance, said:

"Members of the committee have received numerous letters protesting against the issuance of monthly forecasts of demand for motor fuel and crude oil, complaint being made that the reports penalize many thousands of independent oil marketers. The committee has taken occasion to inquire into the question and several statements have been made which appear in the hearings on the bill. The committee was advised by these persons that continuation of the issuance of demand forecasts is highly desirable, that it acts as a stabilizer for the oil market, and that those persons objecting to the forecasts were in favor of a demoralized market which would enable them to purchase oil from small refineries at a low price and store it for sale when prices have advanced. The committee recommends continuation of funds for the issuance of the monthly forecasts."

At the same time, the committee recommended an appropriation of $225,000 for the Petroleum Conservation Division, which administers the Connally Act, a decrease of $500,000 from the appropriation for the current year.

6 States Ask Supreme Court For Rehearing on Elk Hills

WASHINGTON, March 4.—Apprehensive of damage to the validity of titles to school land grants, six western states have filed briefs with the U. S. Supreme court in *amici curiae*, supporting an appeal of Standard Oil Co. of California for a rehearing in the Elk Hills case.

The six states, California, Nevada, Washington, Colorado, Utah, and New Mexico anticipate a tremendous loss of income from school lands if titles are opened to attack by the Secretary of the Interior at any time.

New Mexico claims that endangering titles in her school lands would result in more serious damage than to any other state, as the second and 32nd sections in any township are included in her grant in addition to Sections 16 and 36.

The attorney general of California, in his brief, criticized Secretary Ickes for his statement in a recent speech that he "could not but be proud" of his part in returning these oil-bearing lands to the Federal government. Quoting the Secretary in part, the California attorney-general stated that no "impartial" judge could take credit or blame for the outcome of such a case.

Cites Radio Broadcast

As a part of the California Standard's application for rehearing, an appendix was filed quoting in full a radio broadcast by the Interior Department over Mutual Broadcasting System on Jan. 8, 1939, while the Section 36 case was still pending before the Circuit Court of Appeals in California.

The broadcast was entitled, "My Dear Mr. President," and described "a blue-covered volume" which was the annual report of the Interior Secretary.

This broadcast described the secretary's report in the same dramatic form as was applied to the recent broadcasts on the Cole Oil Control Bill.

There are the same technical directions, such as "sneak in sounds of oil fields," and quotations from citizens saying, "Sure. The government was silly giving this land away back there to California for schools. Should have known that was oil land!"

Then the broadcast melodramatically brings in:

"2nd Voice: Oil is needed in this war!

"3rd Voice: Oil for our navy!

"4th Voice: Oil for our army!

"5th Voice: Oil for tanks! Oil for trucks! For transport! Oil for ambulances!

"6th Voice: We need oil!"

Commenting on this broadcast, the petition for a rehearing points out:

"This case is one of the principal subjects of the broadcast, and in the treatment thereof truth is sacrificed to dramatics. Had the broadcast been wholly accurate, however, the exhibition itself emphasizes the absence of even a thought that its central figure was depicting a udicial character."

Ickes Says His Regime Was Best in 91 Years

WASHINGTON, March 4.—Secretary Ickes modestly reported today that more has been accomplished in the seven years since he has been running it "to make the Department of the Interior a department of conservation than was accomplished in the prior 91 years of existence."

However, little was said about oil in his 11-page release, which was issued apropos of the fact that today is the anniversary of presidential inauguration previous to the "lame duck" amendment, changing the date to January 20 instead of the traditional March 4.

"It is refreshing," the Interior Department release said, "and encouraging to notice the change of attitude towards national resources that has swept over this country in recent years and now receives the wholehearted support of its citizens. As America beholds the rest of the world slaughtering itself as nations fight for resources, and bombs, shells, battleships, battalions, torpedoes and machine guns speak their national need for oil, lands, minerals, waters and resources, this country at ast realizes its heritage."

Mentions Elk Hills Case

One of the "outstanding" achievements of the seven years, Mr. Ickes' public relations writer declared, was the "recent victorious outcome of a five-year battle by the Department . . . involving valuable oil resources in Section 36 of the Elk Hills reserve in Kern County, Calif. In this historic contest the public's right was reaffirmed in the ownership of one of the most valuable square miles of land in the world, and reimbursement totaling more than $6,250,000 was ordered paid to the Government by Standard Oil Co. of California."

Fuel Oil Price Advances Found Not "Exorbitant"

N. P. N. News Bureau

WASHINGTON, March 4.—After consulting with representatives of large oil companies operating tankers, officials of the U. S. Maritime Commission have determined that, while increases in fuel oil prices along the Atlantic seaboard have been "substantial", within the past few months, they have not been "exorbitant".

This attitude has not been made public yet, but it was contained in the report of Commissioner Woodward to the full commission, following his consultation here Feb. 7 with oil interest representatives. The conference was precipitated by charges by Rep. Bland, Va., chairman of the Merchant Marine Committee, that increasing bunker oil prices were detrimental to U. S. shipping.

Gulf Refiners Cut Runs, 'Gas' Stocks Rise

HOUSTON, March 4. — Gulf Coast Refiners Assn. members reported adding 228,994 bbls. to "unsold" gasoline stocks last week, 189,455 bbls. to motor fuel and 39,539 bbls. to aviation gasoline inventory. Bunker fuel stocks increased 71,450 bbls., to 98,750 bbls. Crude runs at the 10 reporting plants were curtailed 8419 bbls. during the week. Detailed report is shown in next column. (Figures in bbls.)

	Houston District		Corpus Christi District		Louisiana District		TOTAL	
	Feb. 24	Feb. 17	Feb. 24	Feb. 17	Feb. 24	Feb. 17	Feb. 24	Feb. 17
Aviation Gaso.	273,030	253,253	347,640	327,878	None	None	620,670	581,131
Motor Fuel	251,173	186,263	623,947	504,061	138,259	133,601	1,013,379	823,924
Naphtha	None	None	216,100	211,142	None	None	216,100**	211,142*
Kerosine	None	None	None	None	None	None	None	None
Diesel Oil	None	None	None	None	None	None	None	None
Gas Oil	None	None	None	None	None	None	None	None
No. 5 fuel oil	None	None	78,495	60,780	None	None	78,495	60,780
Bunker C fuel	None	None	98,750	27,300	None	None	98,750	27,300
Crude runs	186,796	228,675	429,196	395,156	41,824	42,404	657,816	666,235

*High octane blending naphtha 106,042 bbls. **High octane blending naphtha 109,370 bbls.

Latest Oil Industry Statistics

Mid-Continent Lube Statistics, January, 1940

Reported by Western Petroleum Refiners Ass'n. covering operations of 12 member reporting companies. (Figures in bbls. of 42 gals.)

	Bright Stock	Viscous Neutrals	Paraffin Oils	Steam Ref'd Stock	Blended Oils
Production	190,182	203,968	55,805	50,023	154,702
Shipments:					
Domestic	107,544	161,072	49,455	55,284	165,297
Export	43,722	17,693	521	2,079	13,541
Total	151,266	178,765	49,976	57,363	178,838
Inventory Jan. 31, 1940	275,969	230,129	44,613	68,216	98,092
Inventory Dec. 31, 1939	237,053	204,926	38,784	75,556	122,228
Inventory Jan. 31, 1939	341,154	170,803	44,015	128,638	173,215

Crude Oil Production for the U. S.

(American Petroleum Institute figures)

	Week Ended Mar. 2 Barrels	Week Ended Feb. 24 Barrels	Week Ended Feb. 17 Barrels
Oklahoma	407,550	421,400	427,100
Kansas	176,900	173,200	176,700
Nebraska	...	...	...
Texas	1,496,950	1,396,050	1,361,200
Louisiana	281,050	278,450	278,200
Arkansas	69,000	69,250	68,300
Mississippi	6,800	7,250	6,750
Illinois	402,600	414,200	408,300
Indiana	9,650	6,500	7,250
Eastern (Ill. and Ind. excluded)	100,450	97,550	96,600
Michigan	63,850	64,700	64,900
Wyoming	65,200	67,000	66,550
Montana	17,200	17,250	17,050
Colorado	3,950	3,850	5,050
New Mexico	112,500	111,550	111,200
California	584,600	604,300	622,800
Total U. S.	3,798,250	3,732,100	3,717,950
Crude Imports	80,710	115,430	82,800
Total New Supply	3,878,960	3,847,530	3,800,750

Weekly Changes in U. S. Crude Oil Stocks*

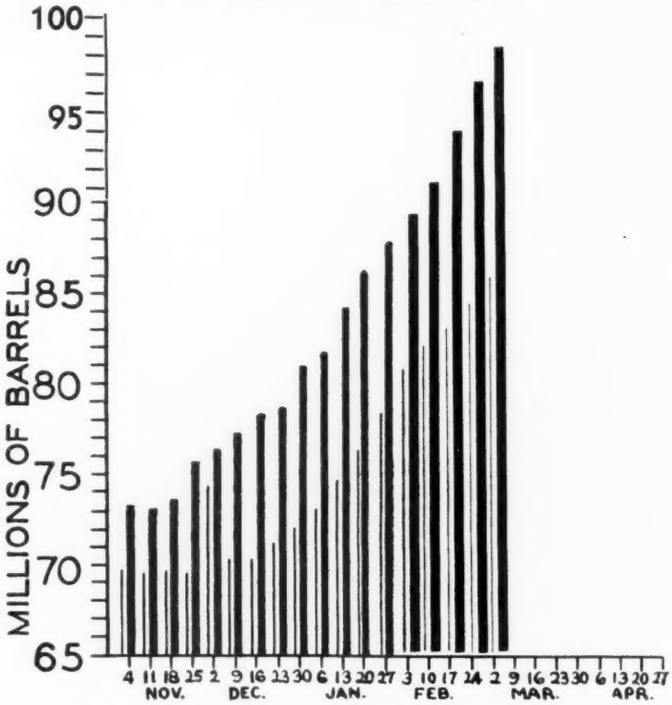
(Thousands of Bbls.)

Grade or origin	Feb. 10	Feb. 17	Feb. 24	Chng. from Feb. 17
Pennsylvania Grade	4,474	4,438	4,434	— 4
Other Appalachian	1,374	1,351	1,340	— 11
Lima Michigan	1,481	1,514	1,512	— 2
Illinois-Indiana	17,440	17,809	17,897	+ 88
Arkansas	2,801	2,862	2,961	+ 99
Kansas	7,967	7,866	8,016	+150
Louisiana:	11,126	11,569	11,417	—152
Northern	3,693	3,662	3,732	+ 70
Gulf Coast	7,433	7,907	7,685	—222
New Mexico	6,353	6,604	6,792	+188
Oklahoma	60,802	†60,947	61,436	+489
Texas:	70,168	69,703	69,475	—228
East Texas	14,984	15,257	15,520	+263
West Texas	15,391	14,765	14,770	+ 5
Gulf Coast	17,911	17,721	16,827	—894
Other Texas	21,882	21,960	22,358	+398
Rocky Mountain	17,505	17,469	17,418	— 51
California	36,003	35,965	36,180	+215
Foreign	2,016	1,741	1,958	+217
Total United States refinable	239,510	†239,838	240,836	+998
Heavy in California	13,250	13,425	13,372	— 53

†Revised
*As compiled by U. S. Bureau of Mines.

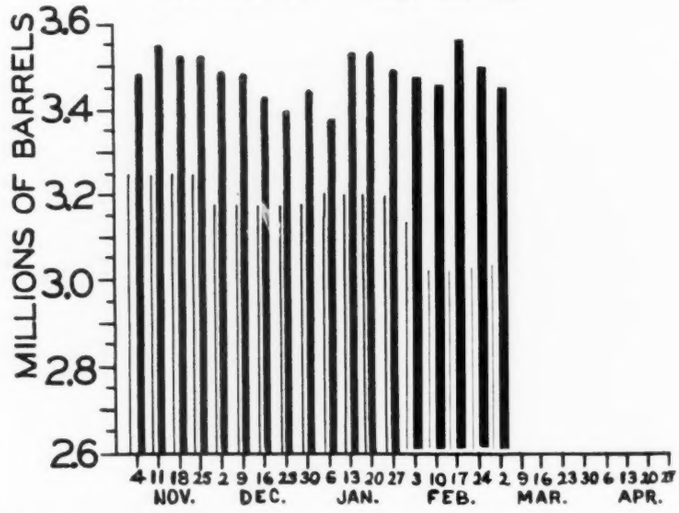
Total U. S. Motor Fuel Stocks

Heavy Line—1939 Light Line—1938



Daily Average Crude Runs to Stills

Heavy Line—1939 Light Line—1938



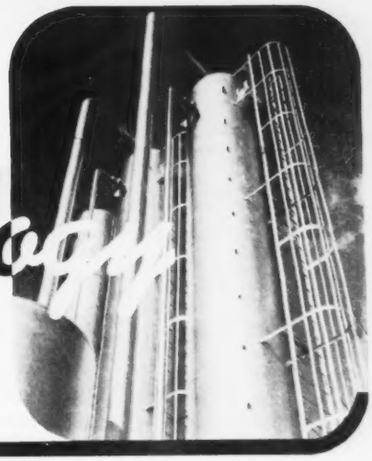
A. P. I. Weekly Refinery Report

(Figures in Thousands of Barrels of 42 Gallons Each)

Districts	Daily Average Crude to Stills Week Ended Mar. 2	Daily Average Crude to Stills Week Ended Feb. 24	Per Cent of Reporting Capacity Operated Week Ended Mar. 2	Per Cent of Reporting Capacity Operated Week Ended Feb. 24	(a) Gasoline Production Week Ended Mar. 2	(a) Gasoline Production Week Ended Feb. 24	Stocks Total Finished & Unfinished Motor Fuel (b) Week Ended Mar. 2	Stocks Total Finished & Unfinished Motor Fuel (b) Week Ended Feb. 24	Stocks of Gas Oil & Distillates At Refineries Week Ended Mar. 2	Stocks of Gas Oil & Distillates At Refineries Week Ended Feb. 24	Stocks of Gas Oil & Distillates At Terms. Trans. Pipelines Week Ended Mar. 2	Stocks of Gas Oil & Distillates At Terms. Trans. Pipelines Week Ended Feb. 24	Stocks of Residual Fuel Oil At Refineries Week Ended Mar. 2	Stocks of Residual Fuel Oil At Refineries Week Ended Feb. 24	Stocks of Residual Fuel Oil At Terms. Trans. Pipelines Week Ended Mar. 2	Stocks of Residual Fuel Oil At Terms. Trans. Pipelines Week Ended Feb. 24
East Coast	540	551	87 8	89 6	1,433	1,350	19,624	19,378	2,380	2,464	4,077	4,333	3,649	3,514	4,216	3,978
Appalachian	125	128	86 2	88 3	427	464	3,924	3,924	247	230	153	170	648	628	...	...
Ind., Ill., Ky	555	555	94 9	94 9	2,253	2,156	16,723	16,025	2,361	2,437	280	311	2,753	2,674	7	8
Okla., Kans., Mo	272	252	79 5	73 7	(c)876	(c)892	8,807	8,736	1,077	1,077	19	22	1,969	1,946	...	...
Inland Texas	117	119	73 6	74 8	469	487	2,132	2,052	277	280			1,494	1,487	...	...
Texas Gulf	822	825	86 5	86 8	2,403	2,493	16,575	16,298	2,790	2,781	521	522	5,361	5,622	242	234
La., Gulf	120	134	68 6	76 6	262	288	3,159	3,223	711	671	33	17	814	948	198	242
No. La., Ark	42	51	76 4	92 7	116	161	756	726	198	210	18	19	475	460	...	...
Rocky Mt.	38	41	59 4	64 1	217	198	1,702	1,661	158	159			495	490		
California	451	470	60 5	63 1	1,176	1,478	18,122	17,966	7,154	7,237	1,886	1,765	56,030	56,302	23,160	28,866
Total Reporting	3,082	3,126	80 4	81 5	9,632	9,967	91,524	89,989	17,353	17,546	6,987	7,159	73,688	74,071	27,823	27,328
U. S. Total (d)	3,445	3,490			11,135	11,523	98,364	96,719	18,028	18,231	6,987	7,159	75,698	76,091	27,823	27,328
U. S. Total 3-2-39 (d)	3,074				10,410		85,596		19,826		8,718		81,499		30,905	

(a) Includes straight-run, cracked and natural blended
(b) Includes stocks at refineries, in bulk-terminals, pipe lines and in transit
(c) 12% of reporting capacity in this district did not report gasoline production
(d) Estimated, U. S. Bureau of Mines basis

Refining Technology



INCLUDING INTERNATIONAL PETROLEUM TECHNOLOGY

J. C. CHATFIELD, Managing Editor

A formula which attempts to evaluate the primary factors which influence demand for gasoline was presented at the recent New York meeting of the American Institute of Mining and Metallurgical Engineers by Norman D. Fitz Gerald of the Department of Petroleum Economics of the Chase National Bank. The equation is not presented to the industry as a means of predicting gasoline demand for the future. It is valuable, however, to the would-be prophet as a guide to his thinking in suggesting the forces which cause motorists to fill up their tanks with gasoline and wander about over the streets and highways of the country.

Dr. Fitz Gerald suggests that there are multitudes of demand influences at work. The primary ones he thinks are: (1) the number of motor vehicles registered; (2) the price of gasoline; (3) the number of miles of hard surfaced highways, and; (4) national income.

In developing his equation Dr. Fitz Gerald determined that the number of registered motor vehicles is the most important factor, with a weight of 68%. The price of gasoline also is important with a weight of 21%. Highway mileage and its trend is given a weight of 8% and national income 3%.

* * *

Most economists who attempt to forecast demand for gasoline and other petroleum products devote a good bit of their attention to the outlook for business activity generally. They do this because essentially the state of business will regulate the number of new cars which are sold, the amount of truck hauling, bus travel, vacations by highway, employment and wage levels.

Figure 1 is a chart developed to show the general correlation of demand for refinery products as a whole with U. S. industrial production. The industrial production curve is the Federal Reserve Board Index which is adjusted for seasonal variation and based on 1923-25 as 100. The curve showing total demand for refined products is plotted as a simple chart of demand in millions of barrels, without seasonal adjustment. If plotted as an index based on 1923-25 as is industrial production, the two curves would be far apart. The two scales are used so that the curves may be compared more easily. The dotted line, which is a 12-month moving average of oil demand, smooths out seasonal variation and shows how the trend of demand follows the general business trend but without sharp peaks due to inventory buying or deep valleys of recessions.

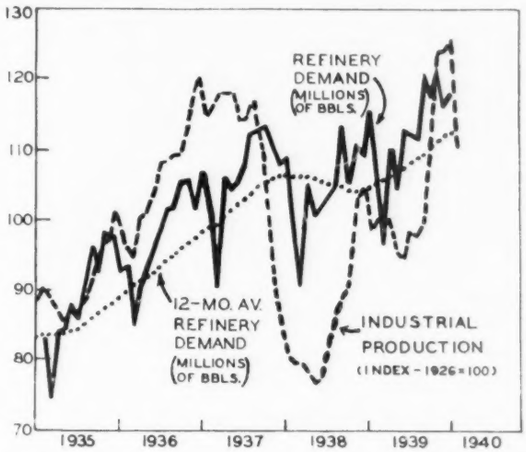


Fig. 1—Demand for oil refinery products compared with the Federal Reserve Board Index of Industrial Production. The industrial production index is based on 1923-25 as 100 and is adjusted for seasonal variations. The curve of demand for oil products is in millions of barrels per month. Dotted line is a 12-month moving average of oil product demand.

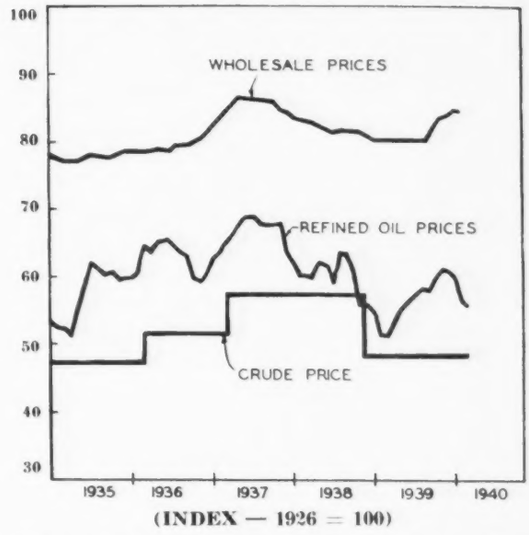


Fig. 2—Index of wholesale prices compared with crude oil and refinery products prices (1926 = 100). Crude price is 36 gravity Mid-Continent. Refined oil price is based on average recovery of Oklahoma-Kansas refiners and open market prices.

* * *

Another evidence of the way in which oil follows general business is seen in Figure 2 which charts crude and refined oil prices in comparison with wholesale prices of a large number of commodities. All curves are based back on 1926 as 100.

Oil prices as a whole have not recovered as well as have the general wholesale level. Improvements in refinery processing which have cut manufacturing costs per gallon of gasoline and the continuing abundance of crude supply are responsible for the fact that crude cost today is less than 50 per cent of 1926 and refinery prices only about 55 per cent of 1926 while the general level of wholesale prices is back up to nearly 85 per cent of 1926.

The general shape of the three curves is the same. Refined oil prices naturally fluctuate more than the composite curve of wholesale prices made up of many types of goods. The crude price curve is subject to abrupt change. It tends to remain high longer than it should when business starts down hill and, on the other hand, it does not respond as quickly as it should to improvements in business conditions.

753
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200 Lubricant Additive Patents Issued in 1938 and 1939

By M. G. Van Voorhis
N. P. N. Staff Writer

EVIDENCE of the trend toward the use of addition agents in lubricating oils and greases for improving various properties is the fact that an average of two patents per week have been issued by the patent office during the past two years.

Among 200 odd patents examined during this period, it was discovered in general that addition agents are divided roughly into five classes. These five classes are led in numbers by those agents intended to impart extreme pressure characteristics to an oil. This group of agents constitutes almost 40% of all the lubricant additive patents issued during 1938 and 1939. These include agents described also as improving film strength and oiliness. While oiliness agents might have been listed under a separate head, in many patents oiliness and extreme pressure improvements are found together. Where oiliness predominates, it is indicated.

Next in number is the group whose objective is improvement of lubricating oil stability. A total of over 40 patents have been issued in the past two years on lubricant additives for improving high temperature stability, oxidation resistance, and resistance to sludging.

The other three classes of additives are those for lowering pour point, of which there are 22 patents, 13 for improving viscosity index, and 34 patents for inhibiting bearing corrosion in the two years. These agents are generally added in proportions under five per cent and in most instances under two per cent.

While there is a possibility that a few patents have been overlooked, it is believed that the following summarization is substantially complete. In order to be as brief as possible the material is given largely in tabular form, using the two headings: Patent Number and Additive. In some instances it has been possible simply to name the agent while in other instances it has been necessary to tell how the agent or agents are produced, particularly where a patent covers certain classes of materials or materials too complex to be named.

The following summarization is divided into the five groups mentioned above and a sixth miscellanecus group. Since many of the additives have value in improving more than one quality of a lubricating oil, a system of reference numbers has been used. These numbers are after patent numbers. Thus, if the additive improves the lubricant in extreme pressure characteristics as well as the property under which the patent is listed, a small number 1 follows the patent number. The number 2 refers to lower pour point, 3 to stabilization, 4 to viscosity index improvement, 5 to inhibiting corrosion, and 6 to improved oiliness. Identification of patentors and assignees, as well as dates of issue are tabulated at the end of the summarization in numerical order of patents. The summary follows:

Extreme Pressure, Film Strength, & Oiliness Agents

2,109,357 Halogenated, natural occurring ester, having wax-like characteristics, such as sperm oil, bottlenose oil, carnauba wax, candelilla wax, raphia wax, cotton seed wax, gondang wax, palm wax, beeswax, spermaceti, rumpgland wax, Japan wax, and myrtle wax; particularly chlorinated carnauba wax. (Oiliness agent.)

2,109,490 Phosphonitrilic halide, particularly phosphonitrilic chlorides.

2,109,491 A condensation product of a phosphonitrilic halide with an organic compound.

2,109,692 Sulfurized aromatic polymer oil containing 20-30% combined sulfur and having an amber color is made from a cracked petroleum oil polymer to be used as a lubricating oil base.

2,109,779 Oil-soluble zinc soap, such as zinc naphthenate, and a corrosive sulfur compound.

2,110,281 Alkyl disulfide, high molecular weight alkyl sulfides, aryl thiocyanates and aryl isothiocyanates, xanthic disulfides, or xanthates.

2,113,752 Mineral oil soluble synthetic ester produced from

[3] Agent also stabilizes oil.

Previous N. P. N. Surveys Of Additive Patents

This is the first summarization of lubricant patents to be published in NATIONAL PETROLEUM NEWS since the series prepared by J. H. Byers and published between December, 1936, and February, 1938. A bibliography of this series follows:

Patent Structure on Pour Point Inhibitors—Dec. 2, 1936, p. 83.

Patents Show Trend in Extreme Pressure Lube Technology—Dec. 16, 1936, p. 79.

Organic Amines Hydroxy Compounds Lead Among Anti-Oxidants for Lubricants—Feb. 10, 1937, p. 67.

The Patent Literature on Gum Inhibitors—Mar. 17, 1937, p. 157. Apr. 14, 1937, p. 58.

The Patent Literature on Oiliness Agents—July 14, 1937, p. R-3.

Patent Literature on Synthetic Lubricants—Oct. 6, 1937, p. R-218.

Patent Literature on Synthetic Lubricants; Additives of Mineraloid Character—Dec. 1, 1937, p. R-359.

Patent Literature on Straight Synthetic Lubricants—Feb. 9, 1938, p. R-42, Feb. 23, 1938, p. R-67.

a monohydric alcohol or aliphatic monohydric alcohol containing at least ten carbon atoms and an organic acid of less than ten carbon atoms. (Oiliness agent.)

2,114,754 Neutral ester of furoic acid. The ester may be an aliphatic alkyl ester or aliphatic monohydric alkyl ester. The acid may also be pyromucic acid. Lime or calcium soap may also be added. (Oiliness agent.)

2,117,076 Ortho-hydroxy-diphenyl, in some instances with a saponifiable oil from the animal and vegetable group which may contain sulfur, chlorine, or phosphorus.

2,118,214-5-6 Chlorinated benzene, an extreme pressure agent, is prepared by passing chlorine into benzene under reacting conditions while observing the solidification point of the resulting product. After this point has risen to a critical high point and fallen again the chlorine passage is stopped and the hydrogen chloride is removed.

2,121,151 Lead oleate (5-15%) with 0.5-5% free sulfur is added after subjecting a high quality oil base to mild oxidation at 450° F. to increase its solvency for the lead soap.

2,121,825 Halogenated alkylated toluene.

2,124,598 Organic compound containing both sulfur and halogen. Produced by reacting a halogenated compound having an aliphatic chain with an inorganic sulfur salt, so as to replace only a portion of the halogen with sulfur.

2,125,169 "An oily, liquid, relatively stable, substantially neutral and non-volatile chlorination product" containing not less than 45% of largely substituted chlorine, such as would be produced by chlorinating a hydrogen-unsaturated petroleum hydrogenation product having a gravity above 0.78 and boiling at 192-538° F.

2,125,851 Stearonitrile, a polymerized aliphatic nitrile. Polymerization takes place in the presence of phosphorus pentasulfide or aluminum chloride.

2,126,590 Halogenated petroleum wax which had a melting point of 50-150° F. before halogenation.

2,129,281 Organic silicon compound having at least one carbon-silicon bond. Tetralauryl silicane, trilauryl silicon chloride, and para-tolyl silicon trichloride.

2,131,138 Aluminum stearate with 1/25 as much zinc oxide and 1/5 as much zinc stearate.

2,134,436 Alkyl-phenyl oxy-ether of 2:4-dintro benzene.

2,134,554 Benzaldehyde, salicylic aldehyde, or benzoic acid.

2,134,736 Esters of polybasic carboxylic acid such as butyl sebacate, dibutoxy ethyl phthalate and dimethoxy ethyl phthalate.

2,136,391 Lead naphthenate or lead sulfonate with an oil soluble substance rich in sulfur such as sulfurized animal, vegetable and marine oils with or without halogen or chlorine.

2,136,885 Nigraniline, finely divided, produced by oxidation of aniline.

2,137,777 Halogenated aliphatic alcohol, chlorinated aliphatic alcohol, or halogenated octadecyl alcohol. These alcohols have a vapor pressure less than atmospheric at 284° F.

2,137,782 Halogenated oxygen-bearing organic or organic-ring compound having a vapor pressure less than atmospheric at 284° F.; halogenated oxygen-bearing aromatic compound; halogen and oxygen-bearing cyclo-aliphatic compound, hydro-aromatic, alkylated-aromatic, carbon ring, or bridged ring compound; or a halogen and oxygen-bearing organic compound of the type in which the halogen is directly attached to a carbon atom of a benzenoid ring structure.

2,137,783 Halogen-bearing derivative of diphenyl ether, chlorine-bearing derivative of diphenyl ether, halogenated diphenyl oxide containing an amount of halogen equivalent to 3-10 atoms per molecule.

2,113,810[3,4] Sulfurized monohydric dihydric ester of linoleic acid the glyceride of which is present in rape seed oil, arachis oil, cotton seed oil, maize oil, ravison oil, sunflower seed oil, and soya bean oil.

2,113,811[3,4] Sulfurized monohydric or dihydric ester of organic acids, the glycerides of which are normally present in corn oil.

2,114,843 E. P. grease consists of 80-85% sulfurized (0.75-1.5% sulfur) lubricating oil and 10-12% lime soap of a fatty material.

2,115,341 Product obtained by esterifying at least part of the OH groups of a hydroxy acid compound of a long chain fatty acid with a low molecular weight ester-forming aliphatic reagent. (Oiliness agent)

2,121,976 Synthetic ester boiling above 150° C. and treated with an alkaline solid adsorptive agent such as clay.

2,138,835 Phosphine oxide, alkyl phosphine oxide, tri-butyl phosphine oxide, tri-phenyl phosphine oxide, halogenated phosphine oxide, or combinations of phosphine oxides, phosphine sulfides, and halogen substitution products thereof.

2,141,142 Product obtained by reacting sulfur monochloride with an aliphatic nitrile having the formula RCN wherein R is an alkyl radical having at least 9 carbon atoms, at a temperature not in excess of 275° F.

2,142,916 Oil is sulfurized and then solvent treated to remove some sulfurized oil constituents.

2,144,469. Castor oil, rapeseed oil, and a stabilizing agent

[3] Agent also stabilizes oil.
[4] Agent also inhibits corrosion.

Contents ...

REFINING TECHNOLOGY
March 6, 1940

Hypoid lubricant performance varies with speed and load. Extreme difficulty is met in meeting maximum requirements under both conditions R-77

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Over 200 patents on lubricating oil addition agents are abstracted and classified for the years 1938 and 1939, by M. G. Van Voorhis R-66

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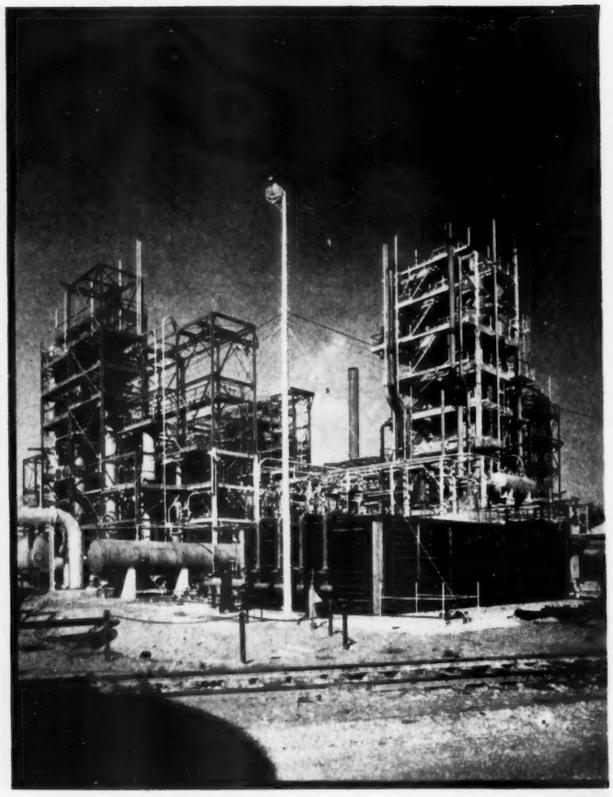

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consisting of a water-soluble metallic soap of the group consisting of zinc and aluminum stearates and oleates. (Oiliness agent.)

2,146,543[3,4] Product of the reaction of a phosphorus trihalide such as phosphorus trichloride and an amine having at least one hydrogen atom directly attached to the nitrogen atom.

2,146,584 Organic compounds of phosphorus and nitrogen or substituted amides of phosphorus acids, such as PCl_3, $POCl_3$, $PSCl_3$, P_2S_3, P_2S_5 with butylamine.

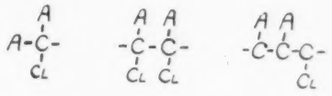
2,147,578 Sulfurized naphthalene.

2,149,271 Phosphine containing an organic substituent, aryl phosphine, or tri-phenyl phosphine.

2,149,788 Aryl sulfonyl chloride such as benzene sulfonyl chloride or toluene sulfonyl chloride.

2,149,857 An acid compound produced from the condensation product of diolefins contained in cracked naphtha with a material selected from the class consisting of maleic anhydride and unsaturated aldehydes. An acid compound derived from the product obtained by the condensation of a cyclic conjugated di-olefin with maleic anhydride. (Oiliness agent.)

2,150,177 Oil soluble phenylated, chlorinated, aliphatic hydrocarbon having any of the following structures in which A represents an aryl group.



2,153,495 Reaction product secured by reacting chlorinated naphtha with potassium ethyl anthate, containing sulfur in the form of xanthate and a residual amount of chlorine.

2,153,482[3] Halogen-bearing dibenzyl disulfide or chlorine-bearing dibenzyl disulfide.

2,153,496 A product obtained by chemically substituting a part only of the chlorine in a chlorinated aliphatic material with a thiocarbonate group, xanthate group, trithiocarbonate group.

2,054,098 Halogenated organic borates having the general formulas $(MX)_3B$ and $(MX)B{=}X$ in which M is a halogenated alkyl radical, a halogenated aryl radical, or a halogenated aralkyl radical, and X is either oxygen or sulfur.

2,155,204 Halogenated complex mixture of organic compounds of the type found in petroleum oils and in which the less stable compounds have been converted by treatment with a condensing agent such as anhydrous $AlCl_3$.

2,156,265 Halogenated petroleum wax and an agent containing "corrosive" sulfur, such as elemental sulfur and sulfurized animal, vegetable, marine and mineral oils.

2,156,803 Synthetic molybdenum sulfide. A substitute for graphite of the "plate forming" type of solid, colloidally dispersed in oil.

2,157,134 Halogenated fatty acid aromatic hydrocarbon halogeniferous condensation product derived by condensing a halogenated organic acid with an aromatic hydrocarbon.

2,157,452 An ester of thiophosphoric acid, triphenyl thiophosphate, triamyl thiophosphate.

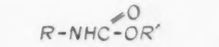
2,158,096 An aliphatic or alkyl acid-ester of a dibasic organic acid, the aliphatic radical containing at least six carbon atoms. Octyl acid phthalate, naphthenyl acid phthalate, or "Lorol" acid maleate.

2,160,915 Organic heterocyclic compounds containing one or more elements other than carbon in the ring. Cyclopholymethylene, aryl substituted phosphoxane, phenyl 1,4-phosphoxane.

2,161,560 Polychlorinated naphthol or polychlorinated betanaphthol.

2,161,584 Dialkyl xanthyl ethyl ether, diethyl xanthyl ethyl ether, or in general, an oil-miscible, substantially water-insoluble dialkyl xanthyl ethyl ether, wherein the alkyl xanthyl radicals are selected from the group consisting of ethyl xanthyl, iso-amyl xanthyl, iso-propyl xanthyl, and benzyl xanthyl.

2,161,615 An ester of the hypothetical carbamic acid, having the general structure:



where R may be a hydrogen atom, an alkyl, alicyclic, or aryl group, and R′ represents an alkyl, alicyclic, or aryl group, and where the total carbon content of R and R′ is at least four carbon atoms.

2,161,678 Halogenated (preferably chlorinated) polyarylalkyl in which halogen is attached to the alkyl group, diaryl trichlorethane in which the two aryls are attached to the same carbon atom, dixylyl dichlorethylene, or dinaphthyl dichlorethylene.

2,164,393 Thio-ether comprising two aromatic radicals at least one of which contains an ester substituent. Bis (3-carbomethoxy 4-hydroxy-thenyl) thio-ether.

2,167,612 Sulfurized base prepared by heating sulfur with naphthenic acids separated from petroleum oil.

2,168,262 Organic esters of sulphonic acid such as aryl and alkyl esters or halogen and hydroxy substituents.

2,168,848 Aliphatic thioamindes having the general structure formula $RCSNH_2$ in which R is an alkyl group. Also "A lubricant comprising an aralkyl (or xylyl-alkyl) ketone having lubricant properties and an alkylthioamide (or heptadecyl thioamide)."

2,169,155 Metallic salts of halogenated or chlorinated naphthenic acids. Lead, aluminum, or calcium soaps of halogenated naphthenic acids.

2,172,285 A base prepared by sulfurizing unsaturated fatty acid obtained from wood oil such as pine wood oil.

2,172,382[1] Halogenated synthetic hydrocarbon oil obtained by halogenating the condensation product obtained by the addition of chlorinated wax to a mixture of an aromatic compound and a catalyst such as aluminum chloride.

2,173,117[4] Carboxylic or naphthenic acid esters of a hydroxy-ether such as diethylene glycol mono-butyl ether. (Oiliness agent.)

2,176,426 A sulfurized lubricating oil is formed by heating oil and sulfur to 350-375° F. for sufficient time to combine the sulfur with the oil in a loosely bound form, and then incorporating lead naphthenate at 220-250° F.

2,176,509 A solid water-soluble, oil-insoluble carbohydrate is dispersed in a grease in solid form. The carbohydrate may be dextrose, dextrine, or sucrose.

2,176,632 Reaction product of a dihydronaphthalene dimer and sulfur.

2,178,513 Organic halogen bearing (particularly chrolinated) compounds and sulfur in active form. These include derivatives of benzene, polyphenyls, naphthalene, phenanthrene and anthracene, chrysene and picene, bridged ring compounds, and hetercyclic compounds.

2,178,514[5] Chlorinated open chain compounds and chlorinated organic ring compounds. An organic phosphate having a vapor pressure less than atmospheric at 140° C. An ester of a phosphorus acid.

2,178,534 Chlorinated aliphatic compound and an organic sulfur compound, both being oil soluble and having a boiling point above 140° C.

2,178,610 Naphthenyl esters of phosphorus acids, such as naphthenyl phosphites and naphthenyl thiophosphites.

2,179,060 Sulfurized sperm oil containing 10-14% sulfur or

[1] Agent also increases film strength.
[3] Agent also stabilizes lubricant.
[4] Agent also improves viscosity index.
[5] Agent also inhibits corrosion.

5, YOU SAY? LOOKS LIKE JUST ONE CONTROLLER TO ME
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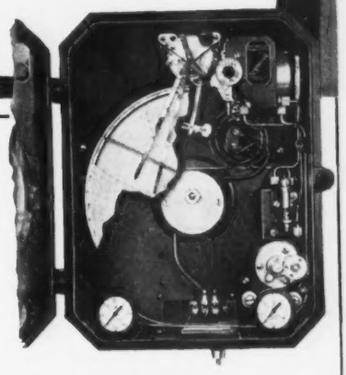

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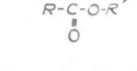
Simplified chart-changing—Separate pen lifter and hub nut eliminated. Need not remove chart for access to dials and knobs.

Long life assured—Vital parts of 18-8 stainless steel. Neoprene gaskets throughout.

a sulfurized naturally occurring ester of a monohydric alcohol and a high molecular weight fatty acid.

2,179,061[3,5] Sulfurized fatty mono-ester or ethyl oleate derived from an ester having the formula:



where R and R′ represent aliphatic groups, at least one of the groups being unsaturated prior to sulfurization.

2,179,067[5] Butyl stearate, tri-cresyl phosphate and sulfurized sperm oil are combined in one oil.

2,180,008 Halogenated resorcinol or chlorinated resorcinol.

2,181,964 Sulfo-polymers resulting from chemically combining sulfur and unsaturated polymers extracted from gasoline produced by cracking or tallow.

2,183,294 Halogenated oxidation product of a hydrocarbon, the alcohols and acids in such product having been converted by esterification.

2,186,646 Sulfurized synthetic ester of a low molecular weight monohydric or dihydric alcohol and a high molecular weight organic acid.

To Lower Pour Point

2,106,247 High boiling polymer produced by the reaction of an aliphatic oxygen-containing compound with an unsaturated hydrocarbon chain of at least 10 carbon atoms and selected from the class consisting of esters and acids on the one hand, and on the other cyclic compounds selected from the class consisting of aromatic hydrocarbons, their hydrogenated alkyl, oxy, hydroxy, nitro and amino derivatives.

2,111,769 High molecular weight ether containing material such as a dehydration condensation polymer of octadecanediol, or a condensation product of a chlorinated paraffin with an ether of a polycylic phenol. In particular, a condensation product of a naphthyl alkyl ether and chlorinated paraffin wax.

2,113,179 Process for preparing a synthetic wax resin pour point depressor by condensation of a mixture of chlorinated wax and an aromatic hydrocarbon in the presence of aluminum chloride. The improvement consists in dissolving the crude wax resin in liquefied propane, heating the solution to 110-120° F., at which point the synthetic wax resins are insoluble.

2,114,812 A compound resulting from first alkylating an ether, such as aryl and aryl-alkyl and aralkyl-aryl ethers and their derivatives, with alkyl radicals of the nature of crystalline petroleum wax and acylating the wax-substituted ether with acylating agent such as the acid chlorides and acid anhydrides of monobasic and dibasic organic acids.

A substance produced by condensing anisole, naphthyl methyl ethers, benzyl naphthyl ethers, or phenyl ethers with chlorinated wax in the presence of aluminum chloride, and then acylating the condensation product with an acid chloride or acid anhydride of the phthalyl, succinyl, cinnamyl, or sebacyl radicals.

2,115,823 Solubilized polysaccharides such as an ether of cellulose, straight-chained and containing at least 20 carbon atoms. Other materials are alkylated cellulose, cellulose ester of stearic acid, cellulose trilaurate, or a condensation product of sucrose with an aliphatic acid.

2,119,718 Glycerol tri-ester of a higher saturated fatty acid devoid of free fatty acid is added to partially dewaxed paraffin base oil.

2,128,109 Polymer condensation product of a waxy hydrocarbon and an ether containing at least one cyclic hydrocarbon radical is added to waxy hydrocarbon oil.

2,138,868 Ultra violet irradiated waxy petroleum lubricating oil (5%) is added to waxy lubricating oil. Wave length of rays is below 2800 Angstrom units.

2,121,326 Material consisting esentially of the residue boiling above 310°C. at an absolute pressure of 10 mm. mercury of a condensation product consisting solely of an aromatic hydrocarbon unmixed with a reactive aliphatic organic compound in the presence of a metallic halide condensation catalyst. A wax crystal inhibitor consisting essentially of a hydrocarbon polymer such as tetra-naphthyl $C_{40}H_{32}$.

2,138,771 Higher saturated fatty acid ester of mannitol such as mannitan tetrastearate.

2,138,771[4] Higher saturated fatty acid ester of mannitol, such as mannitan tetrastearate, or a higher fatty acid ester of a hexahydric alcohol such as mannitolor sorbitol which may be devoid of free fatty acid.

2,138,809 Organic compounds partaking generally of the nature of esterified (i.e., acylated) heavy alkyl-substituted hydroxyaromatic compounds.

2,142,219 To wax-containing viscous hydrocarbon oil is added products obtained by dissolving rubber in a low boiling mineral oil fraction, adding anhydrous aluminum chloride, and effecting a conversion of the rubber with the aid of heat.

2,142,220 Products obtained by subjecting rubber, at moderately elevated temperatures and in the presence of one or more other hydrocarbons to the action of aluminum chloride.

2,147,315 Condensation product of naphthalene and oleyl alcohol.

2,147,545 Product obtained by chemically condensing chlorinated ester wax with a compound selected from the class consisting of phenol, resorcinol, hydroxy, diphenyl, benzyl phenol, and the aromatic ethers.

2,147,547 Product obtained by condensing an aromatic hydrocarbon with chlorinated aliphatic material of relatively high molecular weight and then reacting the product with an acylating agent, such as the chloride or anhydride of an organic carboxylic acid.

2,150,156 Hydrogenated castor oil derivative having a softening point of 70-160° F. A product of the reaction of hydrogenated castor oil with a neutral compound containing at least six carbon atoms, such as dodecyl isocyanate, 2-ethyl hexenal, or other alcohols, aldehydes, isocyanates, and isothiocyanates, at 330-550° F. in the presence of an alkali-metal catalyst.

2,157,078[4] Halogenated poly hydroxy cyclic ester. In general, halogenated esters formed from acids containing more than ten carbon atoms and poly hydroxyl cyclic organic compounds containing one or more hydroxyl groups for each cyclic group.

2,157,079[4] Trichlor phenyl stearate.

2,171,781[3,4] Derivatives or metallic salts of erucic acid such as aluminum erucate, alpha naphthyl erucate, and benzyl erucate.

2,183,009 A pour point depressor is produced by mixing stearic acid with chlorinated paraffin wax and treating this mixture with anhydrous aluminum chloride.

To Improve Stability

2,104,408 Dibutyl phthalate and a polyvinyl acetate.

2,104,796[4] A compound selected from the oil-soluble polymerized acrylic and alpha-alkyl substituted acrylic acid esters of amino alcohols and oil-soluble long-chain fatty acid salts of polymerized acrylic and alpha-alkyl substituted acrylic acid esters of amine alcohols. A compound having a molecular weight of at least 800, which is polymerized beta —(N-dicyclohexyl) aminoethyl methacrylate. Stearate of polymerized diethylaminoethyl methacrylate or polymerized 1 (beta-acrylyloxethyl) piperidene.

2,107,316 Polymer of an ester of animal, vegetable, or fish

[1] Agent also improves film strength.
[2] Agent also stabilizes lubricant.
[4] Agent also improves viscosity index.
[5] Agent also inhibits corrosion.

cils, obtained by passage of high voltage electric discharge through the ester, followed by stabilization of the polymer by hydrogenation, halogenation, or addition of sulfur and condensation with other organic compounds.

2,108,386 A glycyl compound of the general formula $NR{\cdot}H_2NCH_2CO.R'(OH)_n$ in which R is a hydrocarbon radical and $R'(OH)_n$ is a polyhydroxy benzene in which there are at least two hydroxyls and in 1, 2 position.

2,108,954 An aliphatic hydroxy-sulfide (or polysulfide) in which the hydroxy radical and the sulfur are attached directly to the aliphatic group.

2,112,305 Metallo-organic substances in which at least two metal atoms are present in the molecule and linked together according to the formula: $R_xM—NR_y$ where M and N represent the two metal atoms, and the R's represent organic radicals such as alkyl or aryl groups, the subscripts denoting the number of such radicals. Bismuth, tetrecresyl bismuth, mercury, and tetremethyl mercury are named in particular. Trimethyl triphenyl stannane is named in particular.

2,113,150 Oil soluble primary hydroxy amines, preferably those having 5 to 15 carbon atoms.

2,113,599 Depolymerized rubber and an amine agent for stabilizing the combination. The amine agent may be diarylamine, naphthylamine, phenyl-beta-naphthylamine, aldo-alpha-naphthylamine, or 4,4-diamino-diphenyl-methane.

2,115,355 A condensed oxygen-containing aromatic material containing more than two nuclei per molecule and capable of reducing the Sligh value of an oil; condensed diphenyl oxide, for example.

2,117,602 Solvent tar extracted after separation from a lubricant fraction by treatment with a solvent capable of improving viscosity index. The extract is treated with two to three volumes of acetone at 70-80° F. and then with 75-100 pounds per barrel of 98% sulfuric acid, followed by neutralization.

2,119,114 Voltolized aliphatic alcohols or cetyl alcohols; open chain alcohols having at least 10 carbon atoms and unadulterated by other oxygen-containing organic compounds formed as by-products in the production of alcohols by oxidation.

2,119,403 Petroleum distillate is subjected to limited oxidation with ammonium nitrate and then reacted with an ammonium halide in highly dispersed state above 225° C. (437° F.)

2,135,092 The combination of a thickening polymer of the linear hydrocarbon type, an oxidation inhibitor, and an agent capable of maintaining sludge in suspension. The thickening polymer may be polymerized isobutylene, hydrogenated rubber, or condensation products of di-halo hydrocarbons of less than five carbon atoms condensed with mono-cyclic aromatic hydrocarbons. A sludge dispersing agent consists of a high boiling synthetic hydrocarbon condensation product, free flowing and having a carbon-hydrogen ratio closely approaching that of the paraffin series.

2,120,119 An acid releasing product and organic base. Agents include primary, secondary, and tertiary amines, diphenylamine, triethanolamine, and lead naphthenate.

2,133,493 Stable polymer concentrates and oils containing them are prepared by polymerizing a semi-drying to non-drying oil and adding sulfur, selenium, or tellurium. The oil has a decreased tendency to form surface films in the absence of oxygen.

2,136,788 Quinaldine (0.5% by weight) inhibits oxidation.

2,136,846 Triethanolamine (.01-0.5%) stabilizes a lubricant containing 10-25% castor oil.

2,137,494 Anhydrous grease is produced by using an oil soluble soap of water-insoluble saponifiable materials produced by partial liquid phase oxidation of slack wax with lubricating oil.

2,139,766 Di-alkyl diphenol sulfide containing an alkyl group of 4-5 carbon atoms: tertiary amyl-phenol thio-ether or tertiary butyl-phenol thio-ether.

2,140,545 High molecular weight product prepared by voltolization in liquid phase of a mixture of an organic compound having a long hydrocarbon chain and a substance selected from the class consisting of elementary sulfur and an organic sulfur compound.

2,144,078 Aluminum dinaphthenate.

2,144,773[4,6] Acorn oil, an extract of acorns from oak trees.

2,149,856 Mixture of beta-diketones of a metal selected from the group consisting of platinum, palladium, cobalt, nickel, etc. and of a metal selected from the group consisting of cerium, thorium, zirconium, beryllium, barium, etc.

2,150,079[1] At least one each of a halogenated oxygen-free organic compound and an oxygen-bearing organic compound, which is also preferably halogenated. Ortho-dichlorbenzene and halogenated diphenyl oxide are examples of each. Oxygen-bearing compounds include hexachlor diphenyloxide, trichlor diphenyl oxide, monochlor benzophenone, benzophenene, phenyl acetate, phenol, o-phenyl phenol, cyclo hexanol, dibutyl phthalate, methyl salicylate, lauryl alcohol, methyl stearate, tre-ethanol amine, and triethanol amine acetate. Chlorine, bromine, and fluorine are the halogens most desirable.

2,150,400 An iso-cyanic compound selected from the class consisting of acids and esters soluble in lubricating oil. Alkyl and aryl esters of iso-cyanic acids. Alkyl ester of iso-thio-cyanic acid.

2,153,121 Alkaloid of the quinine group, quinine, cinchonine, or cinchonidine.

2,153,973 An organic polysulfide prepared by reaction of a mercaptan with sodium plumbite and sulfur, the latter being sufficient to produce a polysulfide containing more than two sulfur atoms to the molecule. Butyl pentasulfide.

2,154,628 Dialkyl polysulfides and diamyl polysulfide containing dissolved sulfur.

2,161,566 Alkyl esters of alkyl xanthates.

2,162,208 An oil for turbines and transformers containing aniline disulfide to resist sludge formation.

2,165,324 A thickened oil such as fatty or voltolized oil having a molecular weight above 1000 and a viscosity of 100-5000 SUS, a thickened glyceride, or a voltolized rapeseed oil.

2,167,273 Anti-symmetrical di-aryl amine wherein both aryl groups are polycyclic or substituted polycyclic aromatic rings or alpha beta di-naphthyl amine.

2,174,248 Alkyl phenol polysulfides, dialkyl diphenol polysulfides.

2,175,548 Diphenyl carbazide and diphenyl semicarbazide.

2,178,455 A compound of the general formula $C_6R{\cdot}NO$ in which R is H_5 or $H_3(CH_3)_2OH$, o-nitroso-m-cresol, or nitroso-benzol.

2,180,697 Metallic phenyl and aromatic stearates of aluminum, barium, cadmium, chromium, magnesium, and nickel.

2,180,698 Stannous phenyl or aromatic stearate, a sludge solvent.

2,180,699 Zinc phenyl or aromatic stearate, a sludge solvent.

2,181,913 An oil soluble metallo-organic agent, the metal being directly joined to a carbon atom of a hydrocarbon radical. Mercury, cadmium, and zinc are preferred metals in one group, thallium, indium, galliu, and aluminum in another, and antimony, arsenic, bismuth, and vanadium in the third.

2,181,914 Aryl metallo-organic compound having an alkyl group attached to a metallic element. The alkyl and aryl groups are connected by carbon atoms to the same atom of the metallic element. Metallo-organic tin iodide, triaryl tin iodide, and tri-phenyl tin iodide are examples of the metallo-organic compound.

2,181,915 Aliphatic metallo-organic agents such as the alkyl compounds of metals of the II, III, and V groups of the periodic table of elements and having the general formula: R_nMX_{v-n} where R represents one or more aliphatic groups,

[1] Agent also improves film strength.
[4] Agent also improves viscosity index.
[6] Agent also improves oiliness.

M represents the metal constituent joined to carbon atoms of the R groups, and X represents a univalent inorganic function or group which may or may not be present. The subscript v-n denotes the number of X groups attached to the metal in place of R groups to satisfy the valence number of v of metal M.

2,186,346 Salts or salt-like compounds of polyvalent metallic and amphoteric elements, particularly salts of light metals such as calcium, aluminum, and especially magnesium of higher fatty acids, which acids have attached to their carbon chain an aromatic grouping as a side branch through an aliphatic link of one or more carbon atoms. Magnesium alpha benzal stearate or aluminum alpha benzal stearate.

To Improve Viscosity Index

2,106,232 High molecular weight polymerization product prepared from isobutylene alone. The mixture of oil and addition agent are subjected to condensation in the presence of a Friedel-Crafts agent.

2,109,722 Solid thickener produced by the condensation of olefin and diolefin hydrocarbons in the presence of boron fluoride at a low temperature.

2,114,525 Active polymerized products separated from a crude polymerized fatty oil produced by treating it with an inorganic halide polymerization catalyst. The active portion is that which is soluble in benzol and only partially soluble in 50% aqueous alcohol at room temperature.

2,123,641 High molecular weight polymerized oxygenated compounds such as a linear soluble polymer ester of a polybasic organic acid and a polyhydroxy alcohol, said polymer having not over 40% oxygen. Soluble polymer ester of a dibasic organic acid and a glycol may be used or soluble oxygenated polymer esters of a polycarboxylic organic acid and polyhydroxy organic compound.

2,128,958 Oil is subjected to solvent extraction with a mixture consisting essentially of nitrobenzene and acetonitrile.

2,132,847 Unvulcanized rubber which has been plasticized by a peptizing agent such as unsymetrically substituted hydrazine compounds, alpha-nitroso-beta-naphthol, and thiophenols.

2,138,834 Counter-current solvent extraction process for oil containing naphthenic and paraffinic constituents in which a mixture of solvents consists of 43% para-chlorophenol, 47% ortho-chlorophenol, and 10% phenol. The mixture of oil and solvent is cooled until separation occurs and the solvent is distilled from the extract and raffinate phases.

2,139,668 A residue obtained by exhaustively extracting a Pennsylvania residuum with acetone or a solvent having the same solvent properties upon the residuum as acetone, is added to an oil deficient in oiliness.

2,141,593 Five parts by weight of ethylene are condensed with about eight parts by weight of benzene in the presence of a Friedel-Craft catalyst like anhydrous aluminum chloride to produce an oily condensation product. This is separated from sludge and lower boiling point constituents removed to obtain a synthetic oil having a viscosity index of about 80 or above. This is hydrogenated to produce a synthetic lubricating oil having a viscosity index of over 100.

2,152,683[2] A condensation product of an aliphatic polycarboxylic acid having a molecular weight over 1200 and containing less than 27% oxygen is colloidally dispersed in lubricating oil.

2,158,389 Raffinate obtained from extraction of a fatty oil selected from the group consisting of blown and polymerized fatty oils, such as rapeseed, perilla, or poppy seed oil, with a solvent selected from the group consisting of acetone, propyl alcohols and butyl alcohols.

2,167,064 Polymerized aliphatic hydrocarbon product having a molecular weight over 800 and 5-50% of hydrogenated condensed ring compound devoid of acidic substituents such as hydrogenated naphthalene or decahydronaphthalene.

2,176,884[1] Oil is treated with $PSCl_3$ and $AlCl_3$ at 68-390° F. and separating insoluble reaction products.

Corrosion Inhibitors

2,109,463 Thioethers of alpha-anthraquinone, particularly the alkylthioethers, such as those containing the various amyl groups.

2,109,464 An improvement in making organic thioethers of anthraquinone: aqueous solution of an alkali metal salt of alpha-anthraquinone sulfonic acid is heated to boiling while gradually adding an aqueous solution of an alkyli metal mercaptide. Boiling is continued until the reaction is complete.

2,124,628 Polycarboxylic acid obtained by condensation of maleic acid anhydride and olefines.

2,125,305 Alkali metal mahogany sulfonate.

2,125,934 Cobalt mahogany sulfonate.

2,125,935 Cadmium mahogany sulfonate.

2,125,936 Tin mahogany sulfonate.

2,128,574 Synthetic organic acid having an average molecular weight greater than those of acids obtainable by oxidation of high molecular weight natural hydrocarbons. The acid is an oxidation product of a high molecular weight synthetic hydrocarbon oil obtained by polymerization of olefines.

2,133,734 Alkyl succinic acid which is a hydrated condensation product of maleic acid anhydride and an olefine boiling above 480° F.

2,134,432 Ortho-nitro phenyl amyl thioether or an alkyl thioether of ortho-nitrobenzene. These and the following two addition agents are particularly for cadmium and copper bearings.

2,134,433 Ortho-amino-phenyl alkyl thioether.

2,134,435 Alkyl thioether of ortho-amino benzene.

2,139,086 Ethylene cyanide.

2,139,087 Cyano acetamide.

2,139,088 Methylene amino aceto nitrile.

2,139,335 Alpha thiocyano ethers such as ethyl alpha isothiocyano ethyl ether, ethyl alpha thiocyano ethyl thio ether, butyl alpha thiocyano ethyl thio ether, and Amyl alpha isothiocyano butyl thio ether.

2,139,725 Triphenyl arsine sulfide.

2,139,758 Thio benzanilide.

2,145,971 Oil of hydroxy-alkoxy benzaldehyde.

2,147,155 Calcium phenyl stearate and sulfur.

2,154,096 Monovalent radical substituted heterocyclic organic compounds such as thiazines and thiazoles. Examples are 2-amyl thiazole, 2,4 dihexal thiazole, tributyl thiazole, 4-butyl 2-phenylamina thiazole, 4-amyl 2-mercapto thiazoline, meta thiazine, gamma-methyl-alpha-dimethyl penthiazoline, and 2,4 dibutyl thiazine.

2,154,097 Bivalent radical substituted five-membered ring compounds having sulfur and nitrogen in the ring, such as mercapto benzothiazole. Mercapto naphthothiazole, amino naphthothiazole, and benzol derivatives of the thio diazoles, known as piazothioles, and others.

2,157,479[1,3] Ammonium or amino-salt of a phosphite ester of a water-insoluble alkili-insoluble secondary or tertiary alkylated phenol.

2,160,880 Aliphatic or open chain organic compounds containing nitrogen, oxygen, and/or sulfur. Examples are the esters of amide derivatives of carbonic acid such as carbamic acid derivatives. Tin diamyl dithiocarbamate, lauryl dithiocarbamate, thiuram sulfide.

2,160,881 Organic ester of selenic acid such as dibutyl selenate, diamyl selenate, diphenyl selanate, didodecyl selenate, dilauryl selenate, dicyclohexyl selenate, dibutyl thioselenate, and others.

2,162,207 Dianiline disulfide.

2,167,867 Alkyl or aryl phosphates, an organic ester of

[1] Agent also improves film strength.
[2] Agent also improves oiliness.

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phosphoric acid, tricresyl phosphate, mixture of tertiary amylphenyl phosphates.

2,168,674 Hydrocarbon isocyanates having the general formula RNCO in which R is a hydrocarbon group, alkyl and aryl cyanides having the general formula RCN in which R is an alkyl or aryl radical.

2,169,185 Chloralkyl phosphites, particularly a mono, di, or tri chloralkyl phosphite having the general formulas:

$$(R'O)_3P,\ (R'O)_2POH,\ \text{and}\ (R'O)P(OH)_2$$

in which R′ is a chloralkyl group having up to 30 carbon atoms but preferably 3 to 6 carbon atoms in each alkyl radical.

2,169,634[1,3] A phosphorus-sesquisulfide reaction product of a water-insoluble secondary or tertiary alkylated phenol.

2,169,700 Aliphatic and aromatic poly thiocyanates and the aliphatic and aromatic poly isothiocyanates having the general formulas: $R(SCN)_n$ and $R(NCS)_n$ respectively in which R is an aliphatic group or aromatic group and n is a whole number greater than one.

2,174,019 Esters of phosphinous acid having the general formula $(R')_a—P(XR'')_b$ in which R′ and R″ represent alkyl, aryl, aralkyl, alkaryl, and halogen-substuted alkyl, aryl and aralkyl groups; X is oxygen, sulfur, or selenium; and *a* and *b* are integers one or two.

2,177,561 Triphenyl stibine.

2,179,062 Sulfo-chlorinated mono-ester of a fatty acid such as a sulfo-chlorinated sperm oil.

2,179,063-4-5-6 Methods of making and refining sulfurized esters of fatty acids.

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[1] Agent also improves film strength.
[2] Agent also stabilizes lubricant.

Lubricant Additive Patents in 1938 and 1939

Patent No.	Date of Issue (1938 Dates)	Patentors	Assignee
2,104,097	Jan. 4	Pier, Hirschberger, & Lemme	I. G. Farbenindustrie
2,104,408	Jan. 4	P. J. Wiezevich	Std. Oil Dev. Co.
2,104,409	Jan. 4	P. J. Wiezevich	Std. Oil Dev. Co.
2,104,641	Jan. 4	H. F. Green	
2,104,796	Jan. 11	M. A. Dietrich	E. I. du Pont de Nemours
2,106,232	Jan. 25	Zorn & Rosinsky	I. G. Farbenindustrie
2,106,247	Jan. 25	A. H. Gleason	Std. Oil Dev. Co.
2,107,316	Feb. 8	Wiezevich & Turner	Std. Oil Dev. Co.
2,108,386	Feb. 15	Musselman & McConnell	Std. Oil Co. (Ohio)
2,108,954	Feb. 22	J. I. Wasson	Std. Oil Dev. Co.
2,109,357	Feb. 22	Lincoln & Henriksen	Lubri-Zol Dev. Corp.
2,109,453	Mar. 1	Cantrell & Turner	Gulf Oil Corp.
2,109,464	Mar. 1	Cantrell & Turner	Gulf Oil Corp.
2,109,490	Mar. 1	David Lipkin	Atlantic Refining Co.
2,109,491	Mar. 1	David Lipkin	Atlantic Refining Co.
2,109,692	Mar. 1	W. E. Forney	Power Patents Co.
2,109,772	Mar. 1	P. K. Frolich	Std. Oil Dev. Co.
2,109,779	Mar. 1	A. J. Morway	Std. Oil Dev. Co.
2,110,281	Mar. 8	Adams & McNulty	Std. Oil Co. (Ind.)
2,111,769	Mar. 22	G. D. Graves	E. I. du Pont de Nemours
2,112,305	Mar. 29	Raphael Rosen	Std. Oil Dev. Co.
2,113,150	Apr. 5	P. J. Wiezevich	Std. Oil Dev. Co.
2,113,179	Apr. 5	W. B. Kay	Std. Oil Co. (Ind.)
2,113,599	Apr. 12	J. M. Musselman	Std. Oil Co. (Ohio)
2,113,752	Apr. 12	P. J. Wiezevich	Std. Oil Dev. Co.
2,113,754	Apr. 12	Zimmer & Morway	Std. Oil Dev. Co.
2,113,810	Apr. 12	Lincoln & Steiner	Continental Oil Co.
2,113,811	Apr. 12	Lincoln & Steiner	Continental Oil Co.
2,114,525	Apr. 12	Egon Eichwald	Shell Dev. Co.
2,114,812	Apr. 19	Reiff & Badertscher	Socony-Vacuum Oil Co.
2,114,843	Apr. 19	Kaufman & Nelson	The Texas Co.
2,115,341	Apr. 26	Mikeska & Turner	Std. Oil Dev. Co.
2,115,354	Apr. 26	J. I. Wasson	Std. Oil Dev. Co.
2,115,355	Apr. 26	P. J. Wiezevich	Std. Oil Dev. Co.
2,115,823	May 3	Miller & Winning	Std. Oil Dev. Co.
2,116,209	May 3	J. McKee	Sun Oil Co.
2,117,076	May 10	Bennett & Prather	Mid-Continent Pet. Corp.
2,117,602	May 17	R. Bulkley	Socony-Vacuum Oil Co.
2,118,214-5-6	May 24	Marsh & Spina	Hooker Electrochemical Co.
2,119,114	May 31	Richarson & Owen	Std. Oil Dev. Co.
2,119,120	May 31	J. C. Showalter	Std. Oil Dev. Co.
2,119,403	May 31	O. E. Roberts, Jr.	.....
2,119,718	June 7	E. F. Pevere	The Texas Co.
2,120,119	June 7	W. L. Steiner	Continental Oil Co.
2,121,151	June 21	C. B. Karns	Std. Oil Dev. Co.
2,121,326	June 21	E. F. Pevere	The Texas Co.
2,121,825	June 28	C. F. Prutton	Lubri-Zol Dev. Co.
2,121,976	June 28	Mikesta & Cohen	Std. Oil Dev. Co.
2,122,940	July 5	W. D. Hodson	.....
2,123,641	July 12	P. J. Gaylor	Std. Oil Dev. Co.
2,124,598	July 26	L. B. Turner	Std. Oil Dev. Co.
2,124,628	July 26	F. R. Moser	Shell Dev. Co.
2,125,169	July 26	W. J. Marsh	Hooker Electrochemical Co.
2,125,305	Aug. 2	T. G. Murphy	L. Sonneborn Sons, Inc.
2,125,851	Aug. 2	A. W. Ralston	Armour & Co.
2,125,934-5-6	Aug. 9	L. Liberthson	L. Sonneborn Sons, Inc.
2,126,590	Aug. 9	J. Valentine	Lubri-Zol Dev. Co.
2,127,497	Aug. 23	F. A. Webster, Jr.	Std. Oil Co. of Cal.
2,128,109	Aug. 23	P. J. Wiezevich	Std. Oil Dev. Co.
2,128,574	Aug. 30	Van Peski & Coltof	Shell Dev. Co.
2,128,958	Sept. 6	Mueller-Cunradi	I. G. Farbenindustrie
2,129,281	Sept. 6	Lincoln & Byrkit	Continental Oil Co.
2,129,282	Sept. 6	J. M. Page, Jr.	Std. Oil Co. (Ind.)
2,130,664	Sept. 20	J. F. T. Berliner	E. I. du Pont de Nemours
2,131,138	Sept. 27	A. E. Ganzert	.....
2,132,847	Oct. 11	M. A. Dietrich	E. I. du Pont de Nemours
2,133,493	Oct. 18	J. I. Wasson	Std. Oil Dev. Co.
2,133,734	Oct. 18	F. R. Moser	Shell Dev. Co.
2,134,432-3-5-6	Oct. 25	Cantrell & Turner	Gulf Oil Corp.
2,134,554	Oct. 25	L. P. Grobel	General Electric Co.
2,134,736	Nov. 1	R. Reuter	Atlantic Ref. Co.
2,135,092	Nov. 1	G. M. Maverick	Std. Oil Dev. Co.
2,136,391	Nov. 15	F. L. Miller	Std. Oil Dev. Co.
2,136,788	Nov. 15	M. Fairlie	Sinclair Ref. Co.
2,136,846	Nov. 15	A. Furlotti	.....
2,136,885	Nov. 15	Moser & Tuyn	Shell Dev. Co.
2,137,494	Nov. 22	Jolly & McKee	Sun Oil Co.
2,137,777	Nov. 22	Lincoln & Steiner	Lubri-Zol Dev. Corp.
2,137,782	Nov. 22	Prutton & Smith	Lubri-Zol Dev. Corp.
2,137,783	Nov. 22	Prutton & Smith	Lubri-Zol Dev. Corp.
2,138,771	Nov. 29	E. F. Pevere	The Texas Co.
2,138,809	Nov. 29	Reiff and Badertscher	Socony-Vacuum Oil Co. Inc.
2,138,835	Dec. 6	J. G. Butz	The Atlantic Refining Co.
2,138,868	Dec. 6	L. Liberthson	L. Sonneborn Sons, Inc.
2,138,834	Dec. 6	Brown & Diwoky	Std. Oil Co. (Ind.)
2,139,668	Dec. 13	Breth & Kinsel	L. Sonneborn Sons, Inc.
2,139,086	Dec. 6	A. W. Lewis	Tide Water Associated Oil Co.
2,139,087	Dec. 6	A. W. Lewis	Tide Water Associated Oil Co.
2,139,088	Dec. 6	A. W. Lewis	Tide Water Associated Oil Co.
2,139,335	Dec. 6	B. H. Shoemaker	Standard Oil Co.
2,139,725	Dec. 13	E. W. Cook	Tide Water Associated Oil Co.
2,139,758	Dec. 13	A. W. Lewis	Tide Water Associated Oil Co.
2,139,766	Dec. 13	Mikeska & Cohen	Std. Oil Dev. Co.
2,140,545	Dec. 20	Pier and Christmann	I. G. Farbenindustrie
2,141,142	Dec. 20	A. W. Ralston	Armour and Co.
2,141,593	Dec. 27	Clarke and Towne	The Texas Co.
	1939 Dates		
2,142,219	Jan. 3	E. M. Steffen	Tide Water Associated Oil Co.
2,142,220	Jan. 3	E. M. Steffen	Tide Water Associated Oil Co.
2,142,327	Jan. 3	J. M. Musselman	Standard Oil Co. (Ohio)
2,142,916	Jan. 3	G. L. Parkhurst	Standard Oil Co. (Ind.)
2,144,078	Jan. 17	G. L. Neely	Std. Oil Co. (California)
2,144,469	Jan. 17	Townsend and Maxwell	A. G. Richardson & Co. Inc.
2,144,773	Jan. 24	Provine and Bennett	Mid-Continent Pet. Corp.
2,145,971	Feb. 7	Cantrell and Turner	Gulf Oil Corp.
2,146,543	Feb. 7	James, Moran & Evers	Socony-Vacuum Oil Co. Inc.
2,146,584	Feb. 7	David Lipkin	The Atlantic Refining Co.
2,147,155	Feb. 14	R. H. Gardner	Sinclair Refining Co.
2,147,578	Feb. 14	W. B. Hendrey	The Texas Co.
2,147,315	Feb. 14	Pier and Christmann	I. G. Farbenindustrie
2,147,545	Feb. 14	O. M. Reiff	Socony-Vacuum Oil Co. Inc.
2,147,547	Feb. 14	Reiff and Badertscher	Socony-Vacuum Oil Co. Inc.
2,149,271	Mar. 7	J. G. Butz	The Atlantic Refining Co.
2,149,788	Mar. 7	A. S. Orr	Gulf Oil Corp.
2,149,856	Mar. 7	McKone and Lyons	Leo. Corp.
2,149,857	Mar. 7	Mikeska and Rosen	Std. Oil Dev. Co.
2,150,079	Mar. 7	C. F. Prutton	The Lubri-Zol Dev. Corp.
2,150,156	Mar. 14	M. A. Dietrich	E. I. du Pont de Nemours
2,150,177	Mar. 14	Lincoln and Byrkit	The Lubri-Zol Dev. Corp.
2,150,400	Mar. 14	R. Rosen	Std. Oil Dev. Co.
2,152,683	Apr. 4	E. Eichwald	Shell Development Co.
2,153,121	Apr. 4	J. M. Musselman	Standard Oil Co. (Ohio)
2,153,495	Apr. 4	Berger, Moran & Seger	Socony-Vacuum Oil Co. Inc.
2,153,482	Apr. 4	C. F. Prutton	The Lubri-Zol Dev. Corp.
2,153,496	Apr. 4	Berger, Moran & Seger	Socony-Vacuum Oil Co. Inc.
2,153,973	Apr. 11	Rosen and Thomas	Std. Oil Dev. Co.
2,154,096	Apr. 11	C. M. Loane	Standard Oil Co. (Ind.)
2,154,097	Apr. 11	C. M. Loane	Standard Oil Co. (Ind.)
2,154,098	Apr. 11	Loane and Shoemaker	Standard Oil Co. (Ind.)
2,154,628	Apr. 18	B. H. Lincoln	Continental Oil Co.
2,155,204	Apr. 18	C. F. Prutton	The Lubri-Zol Dev. Corp.
2,156,265	May 2	Miller & Smith	Std. Oil Dev. Co.
2,156,803	May 2	Cooper and Damerell	Cooper Products, Inc.
2,157,078	May 2	Lincoln and Byrkit	The Lubri-Zol Dev. Corp.
2,157,079	May 2	Lincoln and Byrkit	The Lubri-Zol Dev. Corp.
2,157,134	May 9	Lincoln and Henriksen	The Lubri-Zol Dev. Corp.
2,157,452	May 9	R. L. Humphreys	Standard Oil Co. (Calif.)
2,157,479	May 9	Cantrell and Peters	Gulf Oil Corp.
2,158,096	May 16	J. H. Werntz	E. I. du Pont de Nemours
2,158,389	May 16	C. C. Towne	The Texas Co.
2,160,880	June 6	Shoemaker and Loane	Standard Oil Co. (Indiana)
2,160,881	June 6	Shoemaker and Loane	Standard Oil Co. (Indiana)
2,160,915	June 6	Wm. Schreiber	Atlantic Refining Co.
2,161,560	June 6	M. L. Crossley	Calco Chemical Co. Inc.

Patent No.	Date of Issue (1933 Dates)	Patentors	Assignee
2,161,566	June 6	E. W. Fuller	Socony-Vacuum Oil Co. Inc.
2,161,584	June 6	Moran and Fuller	Socony-Vacuum Oil Co. Inc.
2,161,615	June 6	M. A. Dietrich	E. I. du Pont de Nemours
2,161,678	June 6	K. H. Klipstein	Calco Chemical Co. Inc.
2,162,207	June 13	Moran and James	Socony-Vacuum Oil Co.
2,162,208	June 13	Moran, James & Fuller	Socony-Vacuum Oil Co.
2,164,393	July 4	E. A. Evans	C. C. Wakefield & Co., Ltd.
2,165,324	July 11	Wiezevich and Wasson	Std. Oil Dev. Co.
2,167,064	July 25	M. A. Dietrich	E. I. du Pont de Nemours
2,167,273	July 25	W. W. Cook	Tide Water Associated Oil Co
2,167,612	July 25	Gus Kaufman	The Texas Co.
2,167,867	Aug. 1	A. F. Benning	E. I. du Pont de Nemours
2,167,867	Aug. 1	A. F. Benning	E. I. du Pont de Nemours
2,168,262	Aug. 1	Klemgard and Ricketts	Shell Dev. Co.
2,168,674	Aug. 8	Loane and Shoemaker	Standard Oil Co. (Ind.)
2,168,848	Aug. 8	A. W. Ralston	Armour and Co.
2,169,155	Aug. 8	Lincoln and Henriksen	Lubri-Zol Dev. Corp.
2,169,185	Aug. 8	Shoemaker and Loane	Standard Oil Co. (Ind.)
2,169,634	Aug. 15	Cantrell and Turner	Gulf Oil Corp.
2,169,700	Aug. 15	Loane and Shoemaker	Standard Oil Co. (Ind.)
2,171,781	Sept. 5	R. C. Cantelo	Sinclair Refining Co.
2,172,285	Sept. 5	Lincoln and Steiner	Continental Oil Co.
2,172,382	Sept. 12	Henriksen and Lincoln	Lubri-Zol Dev. Corp.
2,173,117	Sept. 19	J. W. Johnson, Jr.,	Atlantic Refining Co.
2,174,019	Sept. 26	F. W. Sullivan, Jr.	Standard Oil Co. (Ind.)
2,174,248	Sept. 26	Mikeska and Lieber	Std. Oil Dev. Co.
2,175,548	Oct. 10	Musselman & Lankelma	Std. Oil Co. (Ohio)
2,176,426	Oct. 17	Kaufman and Philson	The Texas Co.
2,176,509	Oct. 17	Neely, Kavanagh & Farrington	Standard Oil Co. (Calif.)
2,176,632	Oct. 17	P. La F. Magill	E. I. du Pont de Nemours
2,176,884	Oct. 24	Butz and Leum	Atlantic Refining Co.
2,177,561	Oct. 24	E. W. Cook	Tide Water Associated Oil Co.
2,178,455	Oct. 31	J. M. Musselman	Standard Oil Co. (Ohio)
2,178,513	Oct. 31	Prutton and Smith	Lubri-Zol Dev. Corp.
2,178,514	Oct. 31	Carl F. Prutton	Lubri-Zol Dev. Corp.
2,178,534	Oct. 31	Lincoln and Steiner	Lubri-Zol Dev. Corp.
2,178,610	Nov. 7	P. L. Salzberg	E. I. du Pont de Nemours
2,179,060	Nov. 7	H. G. Smith	Gulf Oil Corp.
2,179,061	Nov. 7	H. G. Smith	Gulf Oil Corp.
2,179,062	Nov. 7	Smith and Cantrell	Gulf Oil Corp.
2,179,063	Nov. 7	Smith and Cantrell	Gulf Oil Corp.
2,179,064	Nov. 7	Smith and Cantrell	Gulf Oil Corp.
2,179,065	Nov. 7	H. G. Smith	Gulf Oil Corp.
2,179,066	Nov. 7	H. G. Smith	Gulf Oil Corp.
2,179,067	Nov. 7	H. G. Smith	Gulf Oil Corp.
2,180,008	Nov. 14	Lincoln, Steiner and Henriksen	Lubri-Zol Dev. Corp.
2,180,697	Nov. 21	A. C. Vobach	Sinclair Refining Co.
2,180,698	Nov. 21	A. C. Vobach	Sinclair Refining Co.
2,180,699	Nov. 21	A. C. Vobach	Sinclair Refining Co.
2,181,913	Dec. 5	R. Rosen	Std. Oil Dev. Co.
2,181,914	Dec. 5	R. Rosen	Std. Oil Dev. Co.
2,181,915	Dec. 5	R. Rosen	Std. Oil Dev. Co.
2,181,964	Dec. 5	M. B. Chittick	The Pure Oil Co.
2,183,009	Dec. 12	J. Cole	Sinclair Refining Co.
2,183,294	Dec. 12	Lincoln, Henriksen	Lubri-Zol Dev. Corp.
		1940 Dates	
2,186,346	Jan. 9	V. L. Ricketts	Shell Dev. Co.
2,186,646	Jan. 9	Lincoln and Steiner	Continental Oil Co.

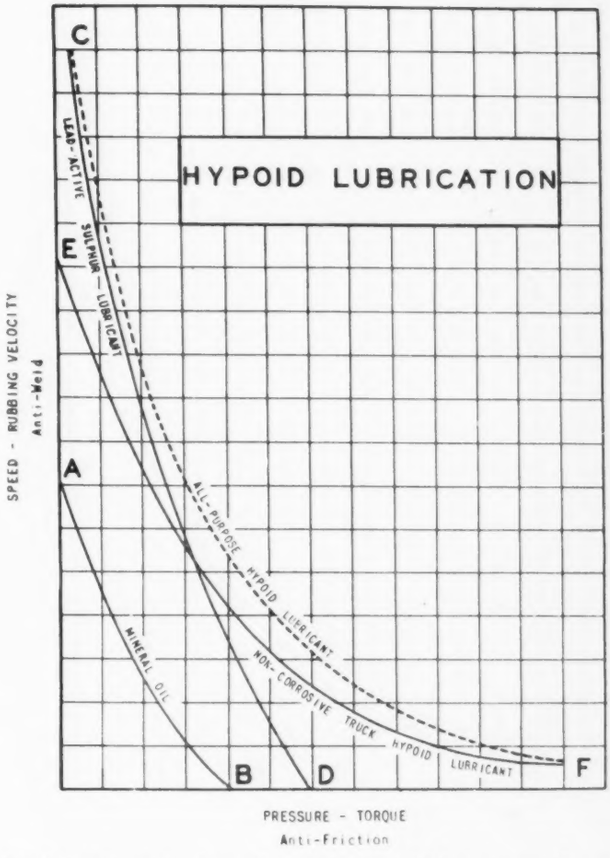
Explains Need for Two Hypoid Lubes

SHOWING why it is necessary to specify different hypoid lubricants for passenger car and truck operation, Dr. C. M. Larson, chief consulting engineer, Sinclair Refining Co., reports that the effect of hypoid gear operating conditions on the performance of hypoid lubricants varies with speed and load. To produce an all-purpose hypoid lubricant meeting both the highest rubbing velocities found among passenger vehicles and the highest torque load requirements among hypoid axles in trucks is an extremely difficult order to fill.

Dr. Larson illustrates his points graphically on the accompanying chart. An all-purpose lubricant meeting both maximum conditions would be plotted by a line such as that dotted in on the chart. The chart shows a lead-active sulfur lubricant which meets the highest speed low-pressure requirement but is only half as good as a non-corrosive truck hypoid lubricant in meeting high-torque low-speed conditions. While the truck hypoid lubricant meets the highest torque low-speed conditions, it is only two-thirds as good as the lead-active sulfur lubricant in meeting high-speed low-pressure requirements where instantaneous focal heat may be high and anti-weld properties are important.

"The lead-active sulfur lubricant C-D shows clearly for the high speeds and high rubbing velocity caused by high road speeds of the Packard and Chevrolet cars . . . Point F is the requirement imposed on the truck axle in first gear, low speeds, by the Dodge truck equipped with hypoid axles." To make a lubricant meeting the conditions indicated by the points C and F "is an extremely difficult requirement and varies greatly with axle temperature", Dr. Larson said. "As the ring gears are made smaller on passenger cars, the demand on the lubricant will be even more pronounced".

"The S.A.E. EP machine correlates the speed or rubbing velocity requirements but to date we have no hypoid lubricant testing machine which will evaluate the lubricants on the basis of point F on the chart", he concluded.



Ideal requirements of an all-purpose hypoid lubricant are shown graphically by the dotted line CF but ordinarily the best that can be done by hypoid lubricants is to reach only one of these extremes as shown by curves CD and EF

Waste Heat Unit Produces 1,000,000 Lbs. of Steam

A STEAM generating system operating entirely on waste heat is a feature of two combination cracking units built by The Lummus Co. for the Pure Oil Co. at its Smiths Bluff refinery near Beaumont, Texas.

The first and older unit comprises a horizontal shell and tube feed water preheater utilizing the heat from the overhead vapors of the cracking unit bubble tower at about 425° F. and 225 lbs. per square inch plus the steam generating units. These latter consist of five horizontal shell and tube exchangers with reduced crude and cycle gas oil through the tubes and water boiling in the shells.

The second and later installation also includes a feed water preheater similar to the other, preheating boiler feed water to 230°-300° F. At this temperature, which is considerably below the boiling point for generating steam at the operating pressure of 125 lbs., corrosion and scaling is kept to a minimum.

The generator itself consists of six vertical shell and tube heat exchangers, with three in parallel heated by cycle gas oil, two in parallel by reduced crude, and one by cracked fuel oil, all these hot streams being in the tubes. These bundles are connected on the shell side to a common horizontal steam drum with circulation through the shell side by thermosyphon. The boiler feed water comes into the drum by means of a centrifugal pump which is controlled by a feed water regulator on the drum. Necessary provisions for blow-down are incorporated in the drum.

No additional pumping equipment is required as all of these units are in lines at points where they would otherwise be water cooled units and in this way, as well as supplying a good deal of steam from waste heat, there is a saving in cooling water. All streams supplying heat for steam generation are maintained at approximately the same quantities and outlet temperatures as if water cooling surface had been used.

Six conventional heat exchangers serve as steam boilers to produce most of a combination cracking unit's steam requirements

Under normal operation all the steam generated is from waste heat that would otherwise go into water. The bundles heated by reduced crude and cycle gas oil, however, have enough oversurfaces so that a good deal of additional steam can be generated at the expense of crude preheat thus allowing balancing the plant steam and gas systems. The steam production amounts to about 1,000,000 pounds per day of 125-pound saturated steam although by means of shifting heat loads this quantiy may run some higher or considerably lower. In most combination cracking units there is more waste heat at temperatures of 400° to 500° than can be used for preheating crude to the unit and in such cases a considerable amount of steam can be generated at no additional operating cost and with an investment which is low compared to the value of the steam generated.

N.L.G.I. Grease Classification Used in Federal Purchases

Grease specifications of the procurement division of the U. S. Treasury department now include the National Lubricating Grease Institute classification based on consistency in terms of A.S.T.M. worked penetration numbers. The classification will be used tentatively in current governmental purchases.

The classification was adopted by the institute last October at its seventh annual meeting in Chicago after several years of co-operative work with other technical associations. The classification includes seven grades, No. 0 to No. 6, ranging in penetration numbers from 385 down to 85, each grade having a range of 30 numbers and being separated from the next grade by 15 numbers.

Chief Safety Engineer R. B. Roaper presented the American Petroleum Institute's certificate for having worked one million hours without a disabling injury to laboratory employes of the Humble Oil & Refining Co.'s Baytown plant. **Dr. Sherman S. Shaffer,** head of the laboratory division and **Paul L. DeVerter,** of the standardization laboratory accepted the award for employes.

Aristid V. Grosse, formerly asscciate director of research, Universal Oil Products Co., Chicago, resigned recently to engage in research at Columbia University, New York.

A.S.M.E. Directory

The twenty-ninth annual Mechanical Catalog and Directory of the American Society of Mechanical Engineers, has just come off the press and is available to non-members at $3. It is a 494-page book indexing American manufacturers in this field, their products and trade names.

Correction

Dec. 13, 1939, p. R-528. Article by Dr. Philippovich on Engine Fuel Testing. The following lines were omitted after the last word on the page: . . . "very wrongly. In engines of very different types and, above all, fuels of varying compositions, the use of the octane number as a constant for the Evaluation of knock behavior is impossible.

Liquefied Gas Standards Issued by C.N.G.A.

"Tentative Specifications and Tentative Standard Methods of Test for Liquefied Petroleum Gases" have been published by the California Natural Gasoline Association after nearly three years of intensive committee work under chairmanship of John S. Gallagher, The Texas Co.

The bulletin is intended as a guide in the purchase and sale of liquefied petroleum gas mixtures varying from commercial butanes through mixtures of butanes and propane to commercial propane. Six standard grades in this range are set up as follows:

	Maximum of Range Of Vapor Pressure Lb. Ga. at 100° F.	Range of Allowable Specific Gravities 60° F. 60° F.
A*	80	0.585—0.555
B	100	0.560—0.545
C	125	0.550—0.535
D	150	0.540—0.525
E	175	0.535—0.510
F**	200	0.520—0.504

*Predominately butanes.
**Predominately propanes.

Procedures by which compliance with the specifications may be established are set forth also in the bulletin.

It is believed that acceptance of the standards by the industry will help simplify the relations between manufacturer, distributor, equipment designer, and consumer, and that it will contribute to greater economy and increased safety in the use of liquefied petroleum gases.

In addition to defining standard grades the bulletin includes general requirements, methods of test, standard methods for determination of end point characteristics, vapor pressure, and specific gravity. An appendix provides tables for converting volume at any temperature to volume at 60° F., physical characteristics of light hydrocarbons, relations between standards and various requirements of regulatory bodies, and a vapor pressure conversion chart.

The new bulletin, No. TS-392, is available to nonmembers of the association at $1.50 by addressing George L. Tyler, secretary, C.N.G.A. 510 W. Sixth St., Los Angeles.

The Liquefied Petroleum Gas committee is a sub-committee of the association's Technical committee headed by W. W. Robinson, Jr., The Texas Co. Sub-committee members are Chairman Gallagher; F. S. Burt, General Petroleum Corp.; A. J. Bush, Tidewater Associated Oil Co.; A. L. Hendrickson, O. C. Field Gasoline Corp.; Fred Hough, Southern Counties Gas Co.; C. L. Hutchings, Tidewater Associated Oil Co.; G. N. Hile, Standard Oil Co. of Cal.; A. N. Kerr, Imperial Gas Co.; C. E. McCartney, Petrolane, Ltd.; F. O. Olmstead, Union Oil Co. of Cal.; C. L. Parkhill, Parkhill-Wade; Turner Smith, General Petroleum Corp.; and E. J. Squire, Shell Oil Co.

Research Directory

Publication of the first "Directory of New England Research and Engineering" is announced by the Engineering Societies of New England. It is a guide book for business executives searching engineering advice and assistance. It gives in detail the facilities, experience and industries served by over 300 private consultants and all of the colleges and universities in New England having laboratory and research facilities.

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New Patents

Compiled by R. E. Burnham, patent and trade-mark attorney, 511 Eleventh Street, NW, Washington, D. C., from whom copies may be obtained at rate of 25c each. State number of patent and name of inventor when ordering.

January 2, 1940

Cracking of hydrocarbon oils—P. C. Keith, Jr., Peapack, N. J., and J. K. Roberts, Flossmoor, Ill., assignors of one-half to Standard Oil Co. (Ind.) and one-half to Gasoline Products Co. Filed Feb. 11, 1937. No. 2,185,200.

Cracking hydrocarbon oils—C. W. Nofsinger, Summit, N. J., and D. T. Shaw, Swarthmore, Pa., assignors to Gasoline Products Co. Filed Mar. 26, 1938. No. 2,185,222.

Process for refining mineral oils—J. A. Buchel and R. N. J. Saal, Amsterdam, Netherlands, assignors to Shell Development Co. Filed Nov. 6, 1933. No. 2,185,291.

Solvent recovery—E. G. Ragatz, Los Angeles, and D. E. McFaddin, Richmond, Cal., assignors to Union Oil Co. (Cal.) Filed Apr. 16, 1934. No. 2,185,311

Process for preventing corrosive action of sulfur-bearing petroleum hydrocarbons—T. L. McGee, Rosemead, Cal., assignor to Jenkins Petroleum Process Co. Filed Oct. 4, 1937. No. 2,185,380.

Conversion of olefins into valuable higher molecular products—Walter Flemming and Wilhelm Baumeister, Germany, assignors to I. G. Farbenindustrie. Filed June 8, 1938. No. 2,185,405.

Process of refining hydrocarbon oils—D. F. Gould, Riverton, N. J., assignor to Barrett Co. Filed Aug. 2, 1937. No. 2,185,406.

Method and apparatus for converting oil—P. S. Nisson, Chicago, assignor to Pure Oil Co. Filed Nov. 24, 1934. No. 2,185,516.

Desulfurization of gasolines—Alexis Voorhies, Jr., and E. E. Stahly, Baton Rouge, assignors to Standard Oil Development Co. Filed Dec. 23, 1936. No. 2,185,577.

Conversion of hydrocarbon oils—Kenneth Swartwood, Chicago, assignor to Universal Oil Products Co. Filed Nov. 13, 1936. No. 2,185,757.

Process of treating hydrocarbon oil distillates for removal of mercaptans—W. W. Johnstone, Chicago, assignor to Universal Oil Products Co. Filed Dec. 31, 1937. No. 2,185,768.

Apparatus for catalytic conversions and other contact mass operations; method of conducting reactions in presence of a contact mass; method of converting petroleum and like oils, and apparatus for converting petroleum and like oils—T. P. Simpson, J. W. Payne, and J. A. Crowley, Jr., Woodbury, and C. S. Teitsworth, Plainfield, N. J., assignors to Socony-Vacuum Oil Co. Filed Sept. 1, 1937. Nos. 2,186,928, 2,185,929, 2,185,930, and 2,185,931.

Process for production of polymerized unsaturated hydrocarbons, and method of making unsaturated hydrocarbons—Fritz Rostler and Vilma Mehner, Vienna, Austria. Filed June 19, 1937, and July 21, 1938. Nos. 2,185,951 and 2,185,952.

January 9, 1940

Process for treating hydrocarbons, and process and catalyst for treating polymerizable substances—M. M. Holm and W. H. Shiffler, Berkeley, Cal., assignors to Standard Oil Co. (Cal.) Filed Mar. 9, 1938. Nos. 2,186,021 and 2,186,022.

Recovery of gasoline—R. C. Lassiat, Swarthmore, Pa., assignor to Houdry Process Corp. Filed Feb. 27, 1937. No. 2,186,029.

Process for treating hydrocarbons—A. L. Lyman, Berkeley, Cal., assignor to Standard Oil Co. (Cal.) Filed Mar. 9, 1936. No. 2,186,031.

Conversion of hydrocarbon gases—L. G. Story, Bronxville, N. Y., assignor to Texas Co. Filed Sept. 12, 1936. No. 2,186,275.

Solvent refining of hydrocarbon oil and recovery of solvent—Wynkoop Kiersted, Jr., Scarsdale, and L. P. Scoville, Flushing, N. Y., assignors to Texas Co. Filed May 25, 1938. No. 2,186,298.

Process for removing acid components from hydrocarbon distillates—D. L. Yabroff, Berkeley, Cal., assignor to Shell Development Co. Filed Feb. 7, 1939. No. 2,186,398.

Process for removing naphthenic acids from hydrocarbon oils—F. R. Moser, Amsterdam, Netherlands, assignor to Shell Development Co. Filed Dec. 24, 1937. No. 2,186,425.

Process for increasing the concentration of olefins in a mixture containing olefins and paraffins—F. E. Frey, M. P. Matuszak, and R. D. Snow, Bartlesville, Okla., assignors to Phillips Petroleum Co. Filed July 26, 1935. No. 2,186,524.

Vapor phase cracking—W. T. Hancock, Long Beach, Cal. Filed June 28, 1938. No. 2,186,585

Process of heat treating gases—Friedrich Martin, Reinhard Jung, and Heinrich Tramm, Germany. Filed Mar. 27, 1936. No. 2,186,590.

Production of hydrocarbon-oxygen compounds—J. C. Walker, Bartlesville, Okla., assignor to Cities Service Oil Co. Filed June 18, 1935, (and in Rumania and Mexico May 17, 1927.) No. 2,186,688.

Lubricating oil composition—V. L. Ricketts, Oakland, Cal., assignor to Shell Development Co. Filed Sept. 18, 1937. No. 2,186,346.

Production of ammono alcohols—A. F. A. Reynhart, Beverwijk, Netherlands, assignor to Shell Development Co. Filed June 6, 1938. No. 2,186,392.

Sulfurized oil—B. H. Lincoln and W. L. Steiner, Ponca City, Okla., assignors to Continental Oil Co. Filed Feb. 20, 1939. No. 2,186,646.

January 16, 1940

Treatment of hydrocarbons — Vladimir Ipatieff and Herman Pines, Chicago, assignors to Universal Oil Products Co. Filed Dec. 17, 1936. No. 2,187,034.

Treatment of hydrocarbon oils—J. C. Morrell, Chicago, assignor to Universal Oil Products Co. Filed Feb. 16, 1931. No. 2,187,048.

Apparatus for treating hydrocarbon oils—C. W. Stratford, Kansas City, assignor to Stratford Development Corp. Filed Apr. 8, 1938. No. 2,187,466.

Method of refining hydrocarbons—H. C. Schutt, Tarrytown, N. Y., assignor to American Locomotive Co. Filed June 25, 1937. No. 2,187,631.

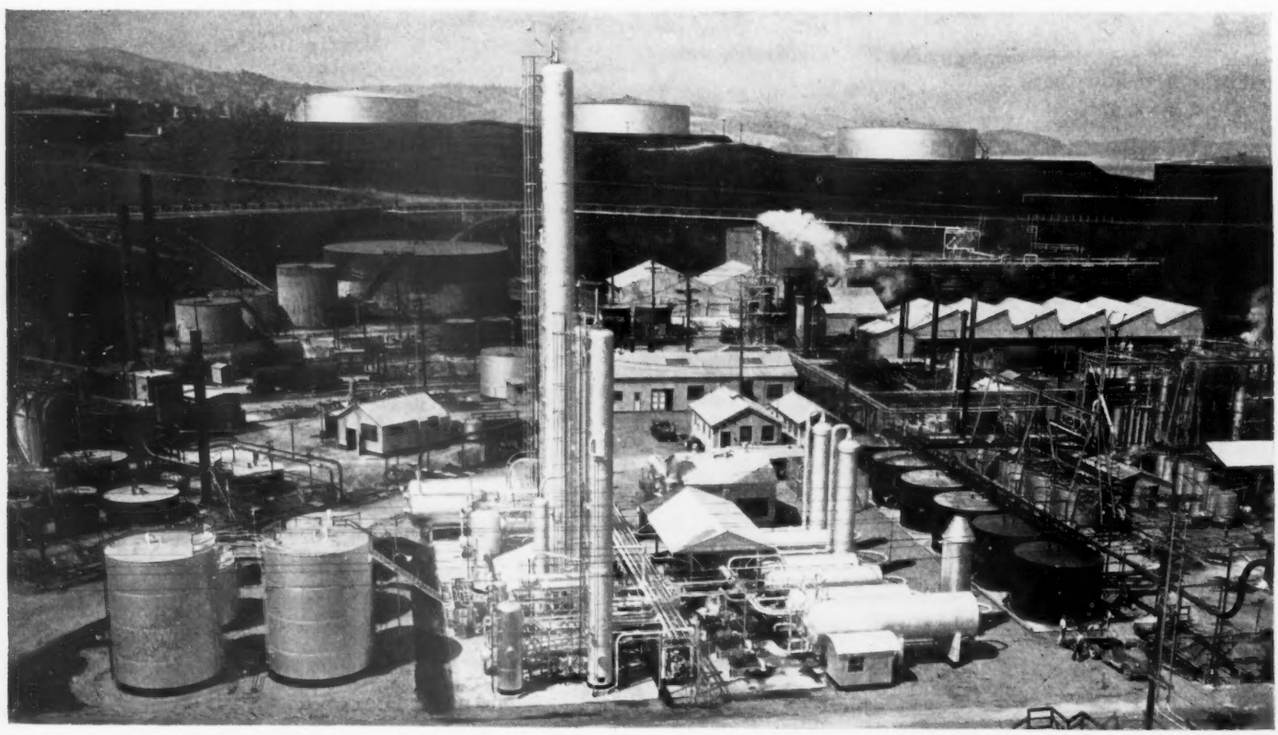
Production of motor fuel—H. V. Atwell, White Plains, N. Y., assignor to Process Management Co. Filed Dec. 14, 1935. No. 2,187,696.

Method of producing lubricating oils—Nikolaus Geiser and Herbert Goethel, Germany. Filed Dec. 15, 1936. No. 2,187,704.

Apparatus for inhibiting tar polymerization—Alois Cibulka, Highlands, and M. W. Mayer, Baytown, Tex., assignors to Standard Oil Development Co. Filed Jan. 31, 1936. No. 2,187,708.

Production of carbon disulfide—Martin de Simo, Piedmont, Calif., assignor to Shell Development Co. Filed Feb. 1, 1938. No. 2,187,393.

Alkylation Plant at Shell Oil Co.'s Martinez Refinery



NPN's 1940 Gallery Shows Styles In Modern Service Stations

THE modern 1940 service station, in two score varieties, is presented in the following pages that constitute this year's NPN's Gallery of Efficient Stations of Today and for Tomorrow.

Here are the latest of station designs and plans that can be obtained. Each station, as in past years, has been selected by the chief executives and engineers and architects of the marketing departments of 30 oil companies. The selections have been made by these companies as representing the best of their stations that have been built in the past year or are being built now. NPN has left the choice of stations entirely to the oil companies.

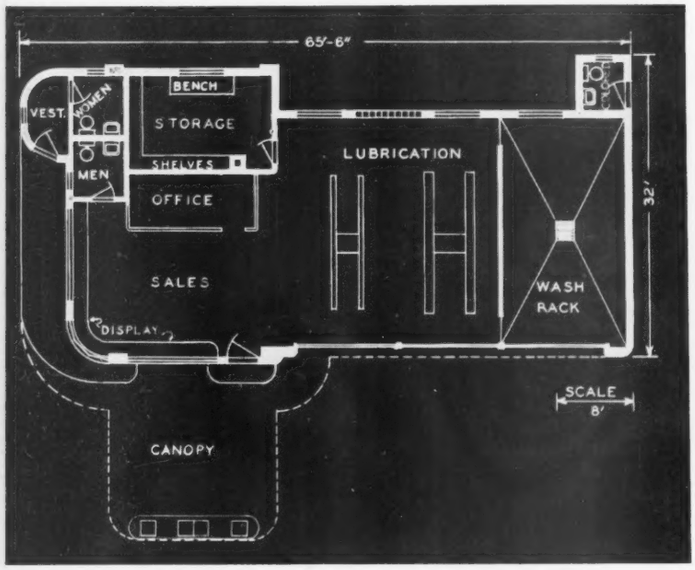
These stations, as hung in NPN's Gallery, show an increasing trend to achieve a style of architecture that is distinctive for the individual oil company, and that will identify the company just as much as does its advertised brand. Some companies have gone further in developing the modern streamline functional type of buildings while others have sought to improve the more conventional styles of architecture.

The reader who strolls through this Gallery of Stations might well do so with his hat in his hand, as in a truly Metropolitan Art Gallery; for these pictures represent as high a degree of skill and taste from as high ranking architects as do the pictures in most any art gallery. The oil companies and the station building manufacturing companies have scoured the country for many years in their search for, and in their development of, the best of talent in designing our gasoline stations.

Each year has seen change—and we believe improvement—in the character of station buildings. Extreme styles of a few years ago have been toned down to lines that are those of sheer beauty. But, as will be noticed as you go through this Gallery, more attention has been given this year to the usefulness and operating efficiency of this year's models, to the better arrangement within the buildings and the greater display of lubricating and other servicing equipment, so that greater use may be made of its showmanship qualities.

So rapidly is the industry developing its station designs that it is almost setting up a definite style for each year, a style that bespeaks change and progress and provides greater selling attention. The movement is making obsolete stations decidedly more obsolete than ever, a change that customers, according to all reports, also are recognizing and heeding with their patronage.

This decided "styling" of stations each year, as it would be called in the "women's wear field" has also emphasized the oldness of old equipment, to the end that new stations or rebuilt stations to new designs are almost invariably fitted with the latest equipment, because it too, has a selling "style" to it.



MODERN CANOPY DESIGN IN THE SOUTH

MATERIALS: Building, concrete block and brick, stucco finished on outside. Standard specification asphalt, three-ply roof, built-up. Concrete floors. Exterior, all white with 4-in. green tile strip around edge of canopy and roof overhang. Red cut-out letters outlined with red neon. Red cut-out letter "S" centered over service department doors.

Interior. Salesroom, plaster on brick and metal lath, ceiling celotex, color buff. Same for lubritorium, adding green dado.

Interiors, plaster on brick and metal lath, celotex ceilings. Color scheme, salesroom buff, lubritorium buff with green dado. Restrooms, buff walls and ceiling, except 5-ft. green wall tile. Green cement floors.

FEATURES: 18 x 19-ft. cantilever canopy supported by two 18-in. I-beams anchored on front pilasters and at rear with tie-bolts to foundations. Three prominent display windows around corner of salesroom—two 10 ft. wide, one 6 ft. wide, all 7 ft. high. For better display of merchandise and service facilities, partition eliminated between salesroom and lubritorium. Railing enclosed office in salesroom. Building dimensions, 26 x 61, with 6 x 27 extension on rear providing additional storage and restroom space and 6 x 6 extension for colored restroom. Overhead doors entirely glass, except for bottom panel. Located on lot 75 ft. square.

HEATING: Oil burning system.

FLOOR AREA: 1780 sq. ft., including building extensions, but not canopy.

SIZE OF UNITS:

Service Dept.	24′	x 37′
Storage	10′	x 15½′
Restrooms	W. 6′	x 10½′
	M. 5½′	x 6′
	C. 4½′	x 5′

Sinclair Refining Co., Atlanta, Ga.

Pure Oil Co., Minneapolis.

IN AN EXCLUSIVE RESIDENTIAL DISTRICT

MATERIALS: Concrete foundation, common brick walls, tile roof. Walls painted white, red brick base, blue roof and trim. Interior of salesroom and lubritorium, gray and white; restrooms blue and white.

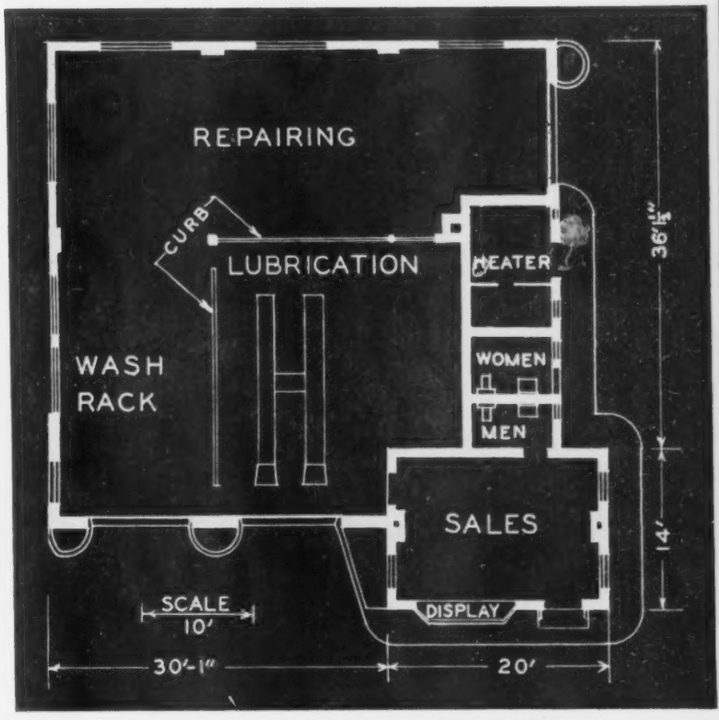
FEATURES: Service facilities include lubritorium set off by curb from "L" shaped continuous car wash and repair room, which opens on front and side of building. Extension to lubritorium behind salesroom provides a 6½ by 18 ft. space for compressor and equipment display. Salesroom features bay treatment of display window. On property 100 x 135 building faces shortest side.

HEATING: Steam system.

FLOOR AREA: 2100 sq. ft.

SIZE OF UNITS:

Sales	14′	x	20′
Lubritorium	22½′	x	25′
Wash rack	14′	x	25′
Repairing	17′	x	31′
Heater	7½′	x	11′
Restrooms W.	5′	x	7½′
M.	4′	x	7½′



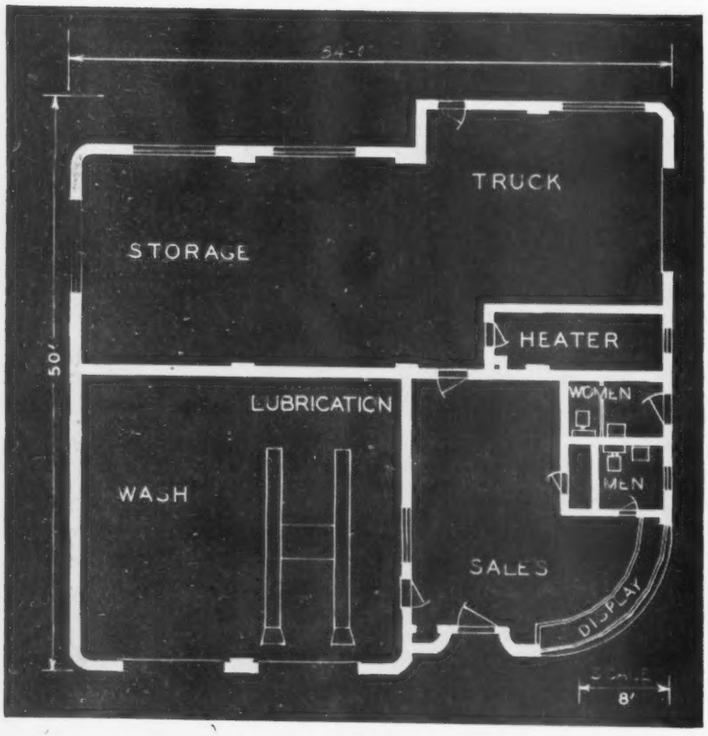
Aero Oil Co., Harrisburg, Pa.

FUNCTIONAL DESIGN WITH EYE-APPEAL

SIZE OF UNITS:

Service Dept.	25′	x 29′
Storage	18½′	x 28′
Truck storage	17′	x 21′
Heater room	5′	x 15½′
Clothes closet	2½′	x 5½′
Restrooms	W. 5′	x 8½′
	M. 5½′	x 6′

MATERIALS: Walls, porcelain enamel sheets covering cinder building blocks, ivory with red trim. Roof, 4-ply, built-up, 20-yr. life with 1 in. of insulation underneath. Salesroom plastered, ivory painted throughout. Lubritorium walls finished in aluminum to 4 ft. 2 in. dado line; ivory rest of walls and ceiling. Restrooms, ivory and red enamel walls to height of 4 ft., ivory plaster above; tan basket weave title floor.

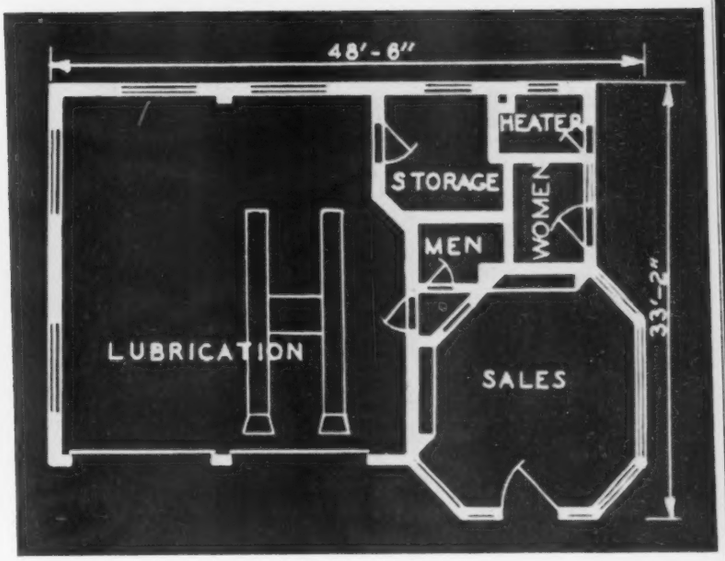


FEATURES: Functional type building, stressing visibility for operator between salesroom, service bays and yard, and taking advantage of high reflecting qualities and smooth surface of porcelain enamel exterior to obtain maximum lighting efficiency and minimum upkeep costs. Large radius window at corner of salesroom emphasizes merchandise display. Large storage and truck room used where station is combined with automobile salesroom.

HEATING: Oil burner, steam, with individual blowers for office and lubritorium.

FLOOR AREA: 2500 sq. ft.

STYLED TO SELL MERCHANDISE



MATERIALS: Steel structure, faced with porcelain enamel; white walls, green base and bands; red letters and stars.

Sales room and lubritorium, plaster on metal lath, white. Rest rooms, summer green and white tile.

FEATURES: A modern show case for special emphasis on merchandise displays results from wide, high windows all the way around the outside of a projecting salesroom. Inside display featured by 6 ft. shelving recessed into two salesroom walls. 3 ft. white cement walk around side and front of building effective in carrying out horizontal lines. Typical of standard type station built by company during 1939, for corner lot at least 75 x 100 ft. Building faces street carrying 60 per cent or more of traffic.

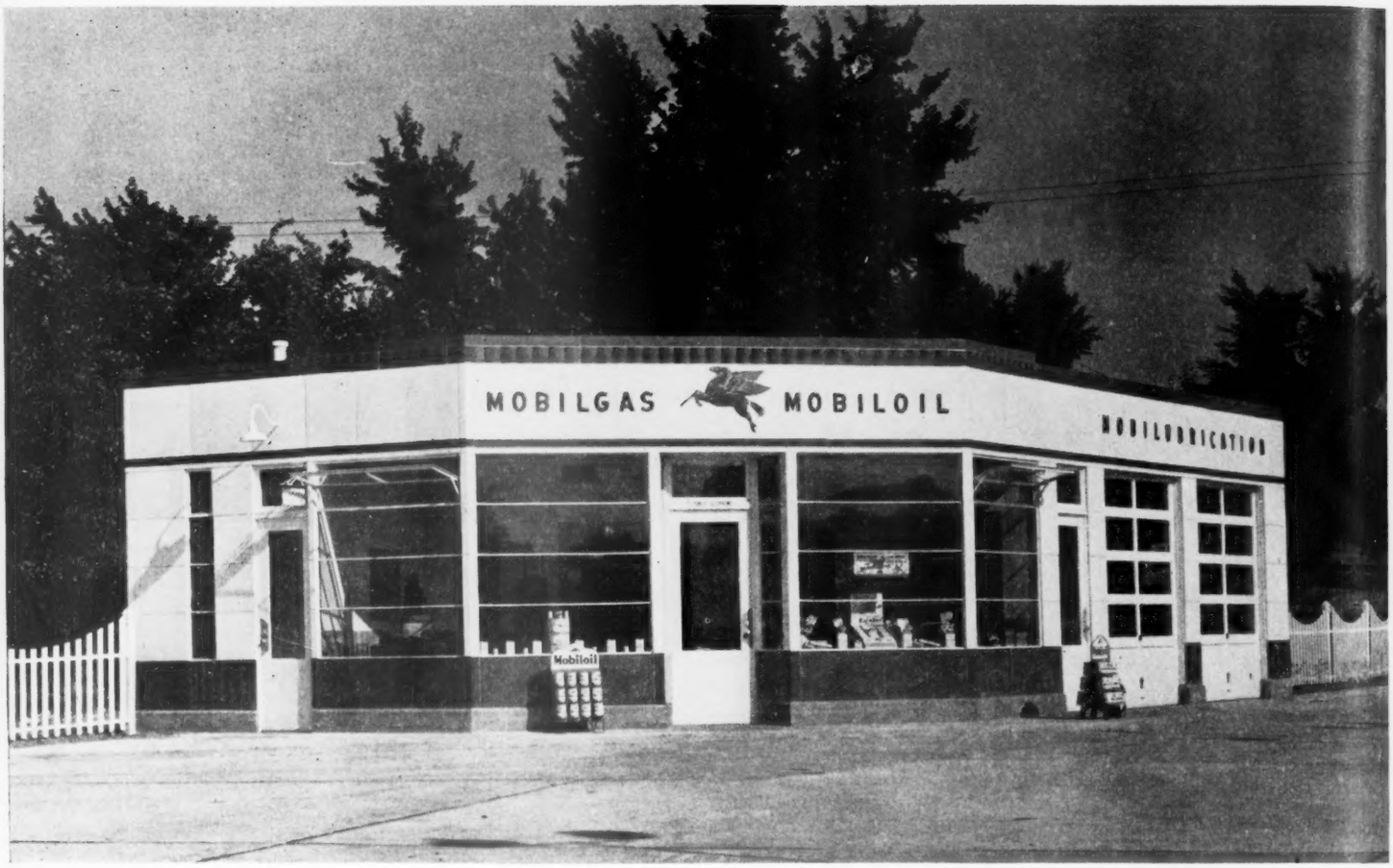
HEATING: Steam system, with unit heat.

FLOOR AREA: 1250 sq. ft.

SIZE OF UNITS:

Service	27′	x	28½′
Heater	4½′	x	8′
Storage	9′	x	10′
Restrooms	W. 6′	x	8′
	M. 4′	x	6′

The Texas Co., Rochester, N. Y.

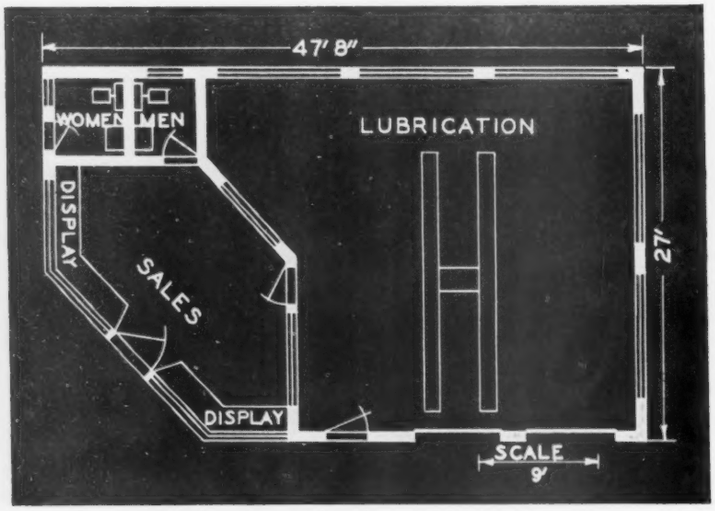


Socony Vacuum Oil Co., Cleveland.

HEATING: Gas fired, hot air system.

FLOOR AREA: 1150 sq. ft.

SIZE OF UNITS:	Service Dept.	25′ x 26′
	Restrooms	5′ x 5½′
	Restrooms	W. 5′ x 5½′ M. 4½′ x 5½′

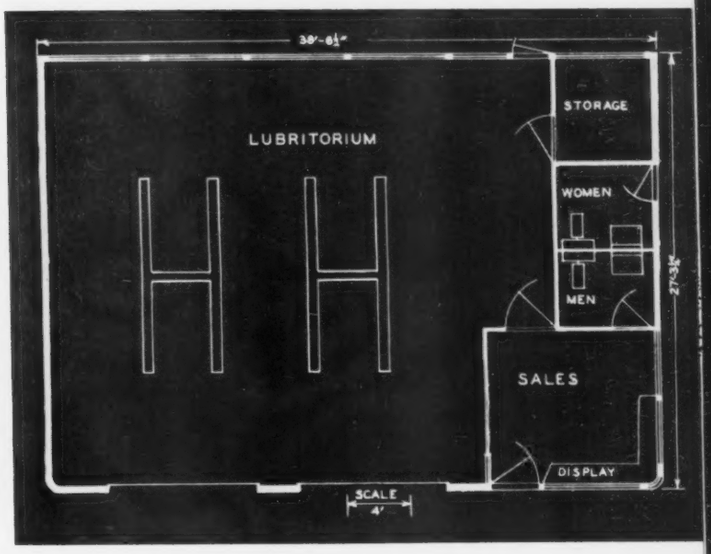


PORCELAIN IN RED AND WHITE

MATERIALS: Insulated steel building, faced with porcelain enamel panes. Roof, steel deck with 1 in. insulation and waterproofing. White porcelain, red base, bands, lettering and "Flying Horse".
Flush steel panels inside painted cream ceiling and walls, except 4 ft. gray wainscot and trim. Red cement floors throughout. All facilities on one floor level.

FEATURES: Leather and chrome chairs provided for customers' convenience in salesroom, with two 6-ft. windows and wide door in partition between this room and lubritorium permitting customer to watch service on his car. Angle extension to lubritorium is location of vertical compressor, employes lockers, and work bench. Entrance to women's restroom on side of building opposite service bays but near merchandise displays in 6 ft., horizontal-paned show windows. Shelving and racks along rear wall of lubritorium provide attractive display storage.

GREEN NEON BEHIND GLASS BLOCK



MATERIALS: Except for inner partitions, building constructed of 4-in. glass blocks laid in a pre-fabricated steel framework, all trim and edgings porcelain enamel, cream except for green horizontal band near top of building. Interior, insulated steel partitions, flush type, cream color. Lubritorium floor red quarry tile.

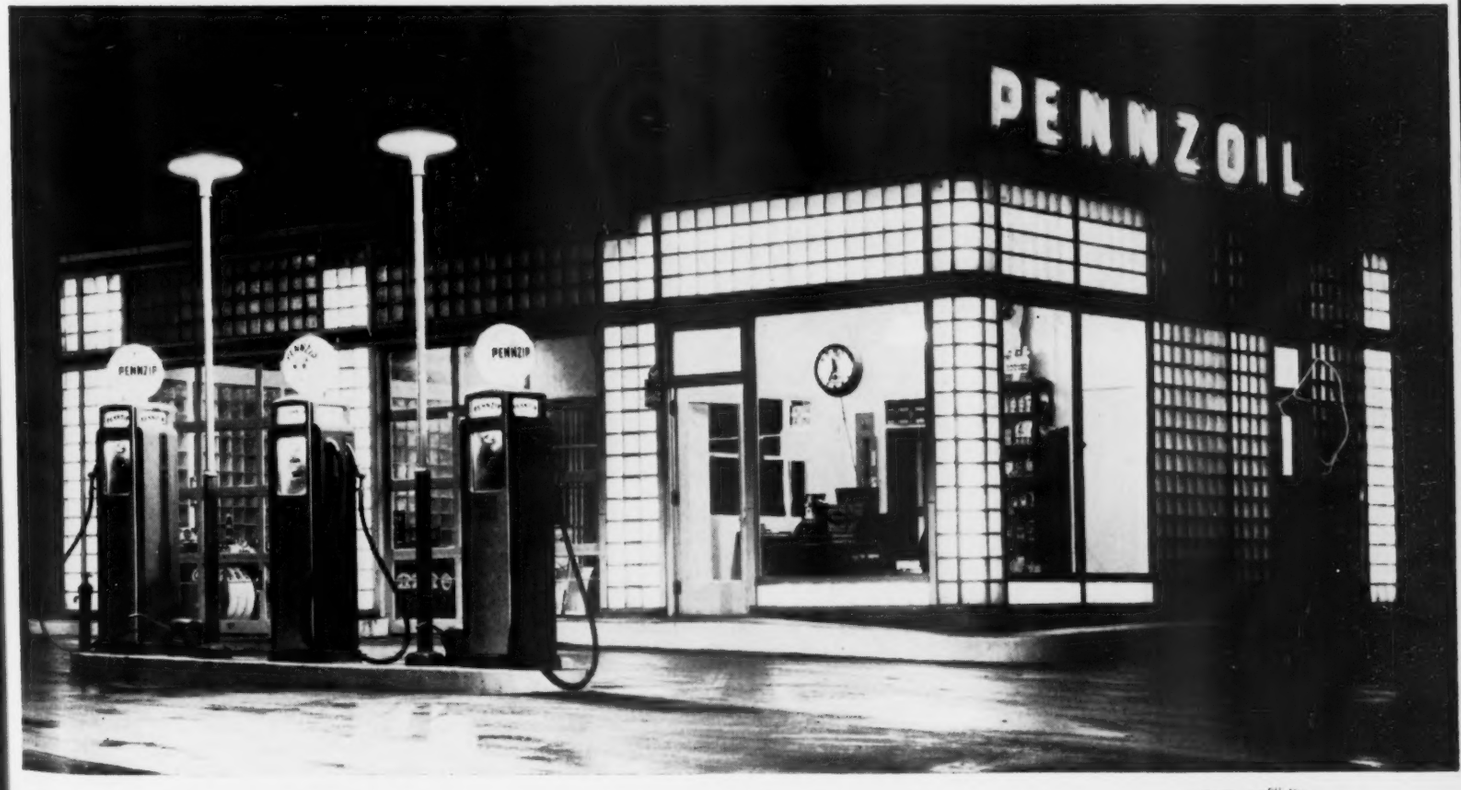
FEATURES: Green neon tubing in back of translucent glass blocks—vertical in pilasters and horizontal across top—provides effective night illumination in combination with red neon signs. Wide, full-length plate glass windows in salesroom, and clear glass squares in overhead doors of two-bay service department offer unusual contrast and display advantages. Service floor 5-in. below level of sales room. Six windows and door feature of rear wall.

HEATING: Gas fired, overhead unit heaters.

FLOOR AREA: 1040 sq. ft.

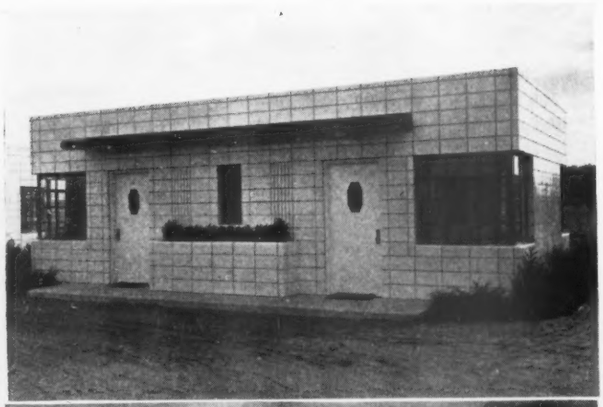
SIZE OF UNITS:

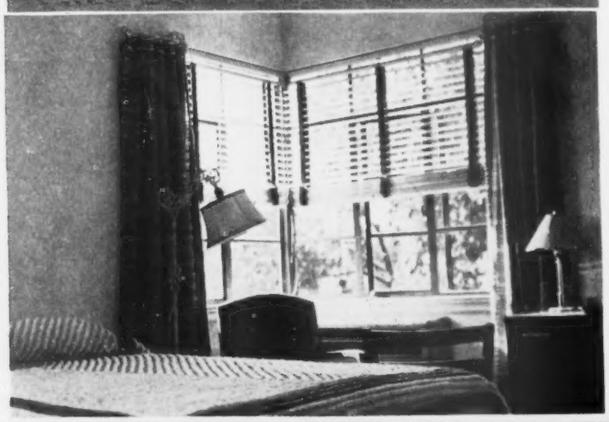
Salesroom	9½′ x 10½′
Service Dept.	26′ x 27½′
Service Dept. recess	4½′ x 16½′
Storage room	6′ x 6½′
Restrooms	W. 5½′ x 6′
	M. 4½′ x 6′

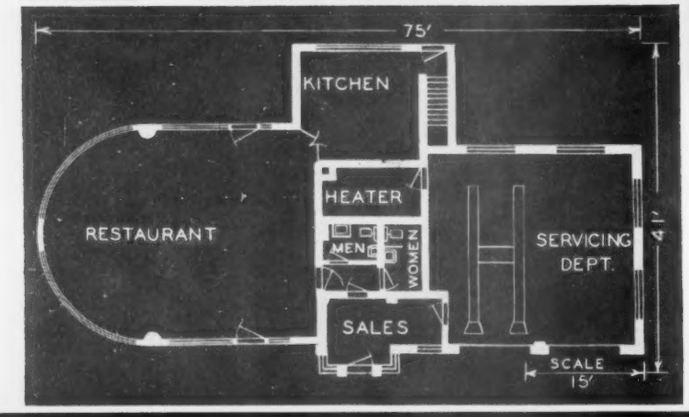


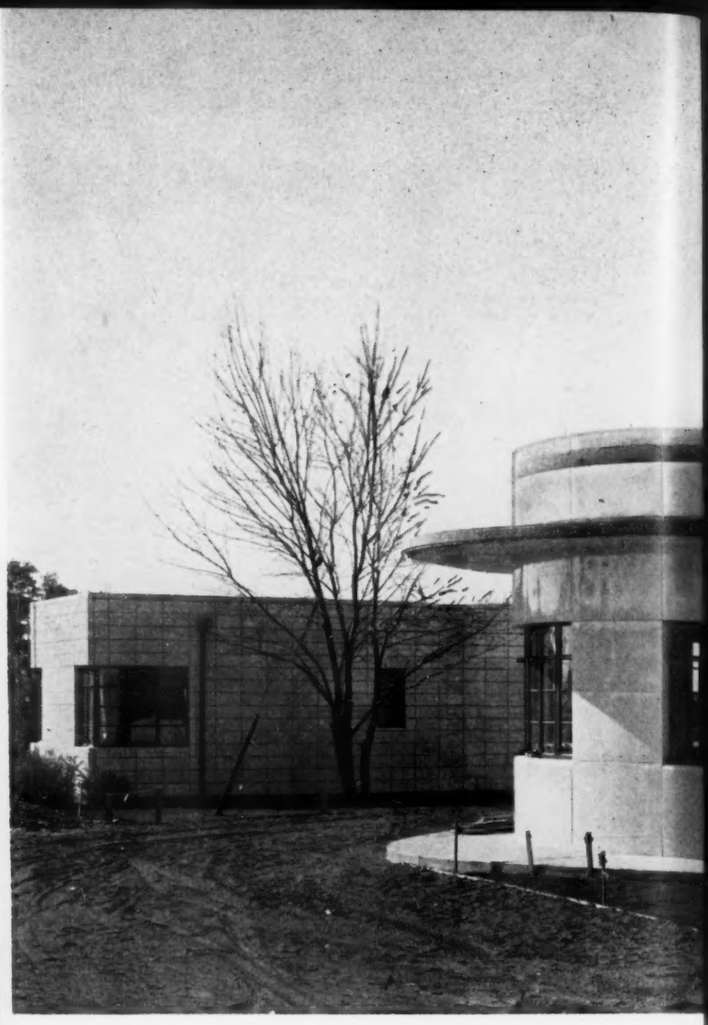
The Pennzoil Co., Mt. Lebanon, Pa.

NPN's 1940 GALLERY
OF MODERN STATIONS









COMBINES STATION,

R

Jackson Hi-Speed Co., Inc., Jackson, Mich.

RESTAURANT, TOURIST COTTAGES

MATERIALS: Buff, glazed stone for sidewalls; glass blocks in panels of tower; built-up asphalt roof; green trim and bands.

Light tan porcelain tile blocks, 4 x 8 in., in lubritorium, salesroom and rest rooms. Plaster ceilings painted 6 shades of blue, from dark down to light, with white half oval moulding between shades. All ceilings insulated with spun glass.

FEATURES: Combines under one roof in attractive modernistic design, an efficient 2-bay service station layout with a half oval dining room and restaurant. Attached kitchen uses common chimney with station heater room. Eating accommodations include a "horse-shoe" counter and a row of chairs and tables beneath full windows around circumference of room. Station's rest rooms open through vestibule into either salesroom or restaurant. Facilities completely air conditioned.

To further complete the "One-Stop" services offered by this station, the facilities include 12 tourist cottages—6 singles and 6 doubles—conforming in design and constructed of the same materials as the station. All steam heated and equipped with shower bath, lavatory, radio, telephone service; twin beds have spring air mattresses; and the buildings feature corner windows and venetian blinds.

HEATING: Steam plant supplying station, restaurant and cottages.

FLOOR AREA OF STATION: 1040 sq. ft.

SIZE OF UNITS:

Service Dept.	24′ x 25′ 9″
Storage	6′ 4″ x 12′ 7″
Salesroom	8′ 4″ x 14′ 6″
Restrooms	W. 4′ 10″ x 7′ 1″
	M. 5′ x 8′ 10″
Restaurant	25½′ x 33′
Kitchen	14′ x 15′

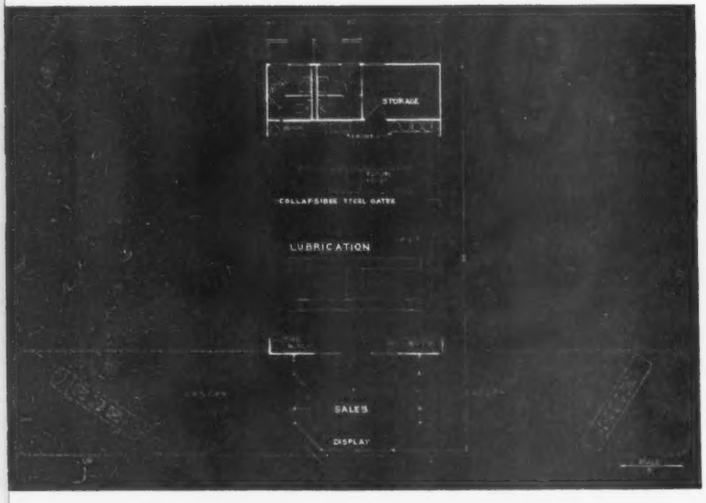
General Petroleum Corp., California and Broadway, Pasadena, Cal.

AVIATION DESIGN FOR HIGH SPEED HIGHWAY

FLOOR AREA: 1056 sq. ft. not including area under canopies.

SIZE OF UNITS:

Office	12′ x	16′
Lubrication unit	22′ x	29′
Store room	7′ x	9′
Restrooms	W. 6′ x	7′
	M. 6′ x	7′



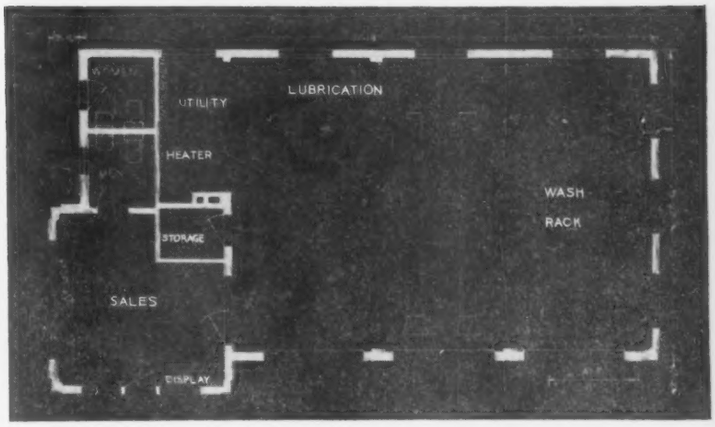
MATERIALS: Entire building constructed of steel, cornices light gauge galvanized iron and walls black iron sheets, fabricated on structural steel frame. Outside painted white, green trim. Salesroom white with green dado. Restrooms, white enamel, gray floor coating. All floors concrete. Counters in station covered with masonite stripped with brass.

FEATURES: On corner lot—105 x 120—at heavily traveled intersection, wing type station designed to permit free access from either street to pump islands and lubrication unit. Layout affords motorist at island drives full view of window displays and service facilities, and gives operator in office or lubritorium, complete view of the pump island. Building dimensions 22 by 48 ft. with two canopies each 13 ft. wide and 32 ft. long. Center line of pump islands 11 ft. in from sidewalks. Provision for addition of second hoist.

Unusually long cornice front facing on intersection allows display of porcelain enamel strip signs advertising company's gasoline, motor oil, and lubrication service.

Bay window effect fronting the 16-ft. sales room, provides excellent display facilities. Lubrication unit equipped with 5 lights. Four corner reflectors, supplemented by portable vapor proof service light, used for night lubrication. A separately switched center light burns when facilities not in use.

WASHABLE SURFACES GIVE MAINTENANCE ECONOMY



MATERIALS: Walls 5 x 8 in. ceramic glazed tile; roof tar and gravel on wood sheathing and joists; porcelain enamel base. Exterior color scheme, cream stipple, red base and lettering, white top trim. Salesroom, cream plaster (standard recently changed to ceramic glazed tile walls and waxed cream colored flexboard ceiling.) Lubritorium, walls, salt glazed buff tile; ceiling light slate colored flexboard.

Restrooms, cream tile wainscot and plaster above wainscot (standard recently changed to ceramic glazed tile above wainscot with waxed cream colored flexboard ceiling.)

FEATURES: Rounded corners and inward sloping top trim, for improved appearance. Identifying tower, 3 x 10, faced with ceramic tile and carrying raised neon letters. Effective use of otherwise waste space made by extending 3-bay service room 6 ft. to provide space for heater, work bench and general utility room. 5 display windows, 3½ x 6½ ft.

Improvements added by 1940 design to this arrangement are replacing wide corner pilaster of salesroom by thin tubular steel support, shifting entrance door and tower to lubritorium side of salesroom, and setting out entire show window from building to give greater prominence to displays.

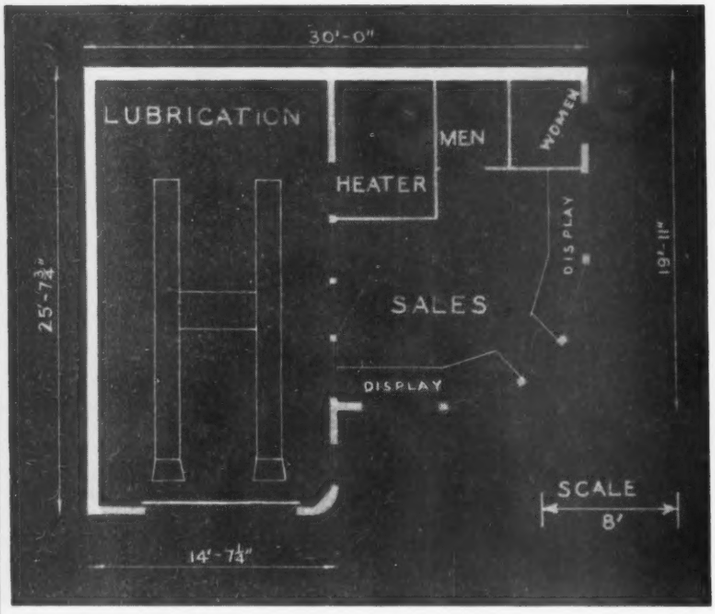
HEATING: Gas unit heaters in Ohio only. Hot air, oil fired elsewhere.

FLOOR AREA: 1400 sq. ft.

SIZE OF UNITS:

Office	15½′ x 15½′
Service	25′ x 39′
Utility	6½′ x 12½′
Restrooms	W. 6′ x 6′
	M. 6′ x 6′

Shell Oil Co., Inc., Toledo.



COMPACT EFFICIENCY ON A SMALL LOT

MATERIALS: Exterior, cream porcelain enamel sheets clipped to prefabricated double-insulated steel wall panels; blue base, orange trim. Interior, finished steel panels of flush type, cream color throughout.

HEATING: Oil burner, hot oil system.

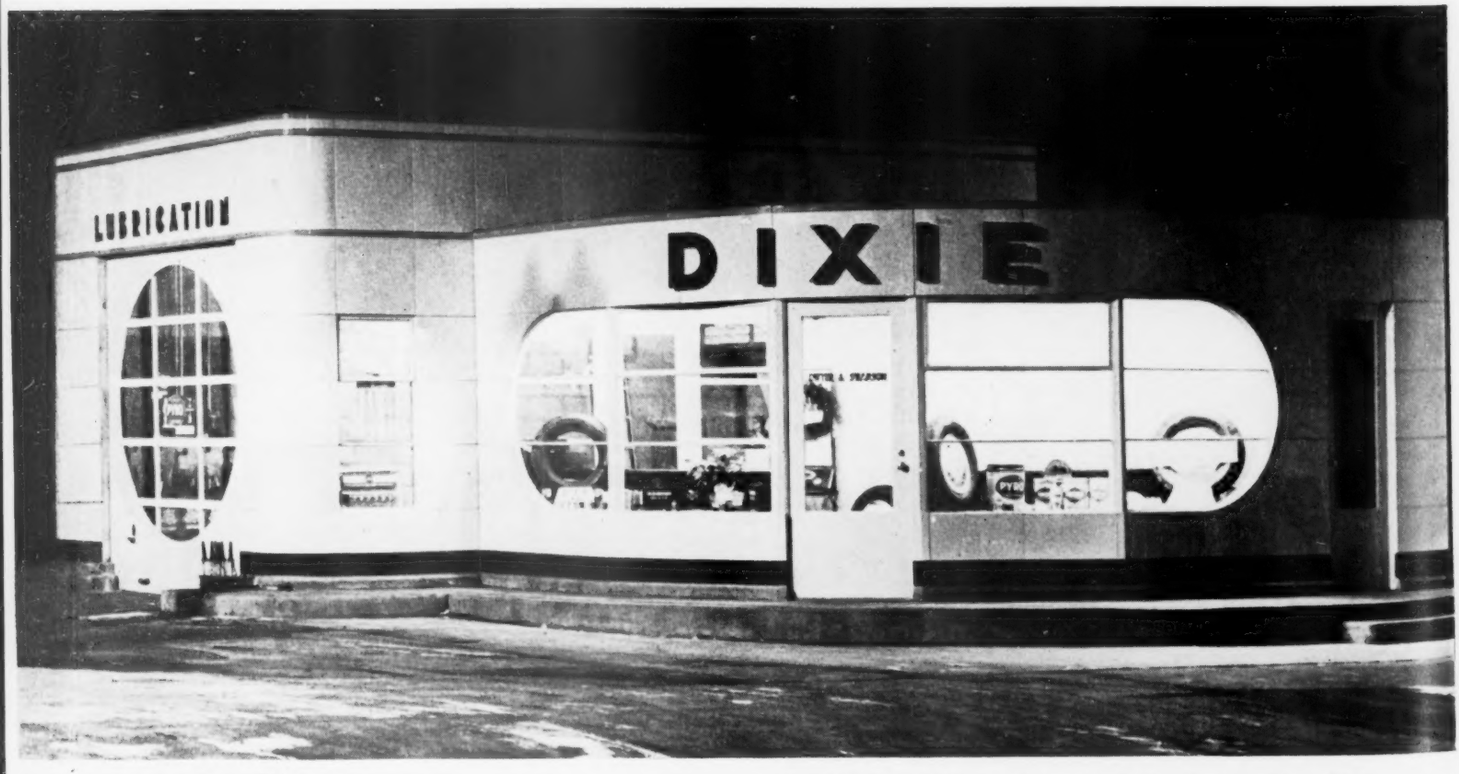
FLOOR AREA: Approximately 680 sq. ft.

SIZE OF UNITS:

Lubritorium	14′	x 25′
Heater room	6′	x 8′
Restrooms	W. 5½′	x 6′
	M. 5½′	x 6′

FEATURES: Designed to fit a small lot—a corner in this instance, 35 ft. wide and 61 ft. 8 in. deep—the building is 30 by 25 ft. 7¾ in. Curved front to sales room gives motorists easy access to and from a three-pump island placed on a slight diagonal.

Curved glass frames in lubritorium door and at each end of large display window, accent modernistic streamlined design. Display visibility highlighted by wide horizontal window panes and use of fluorescent lighting in sales room. Windows are 5 ft. 2 in. high, 4 ft. 10 in. wide.



Staebler-Kempf Oil Co., University & Church, Ann Arbor, Mich.

Skelly Oil Co., Bloomington, Ill.

INSIDE WALL DISPLAY FEATURED

MATERIALS: Exterior: Side walls, hollow tile, white stucco finish. Roof, ten-year bonded, built up to three-ply thickness. Red concrete base and wood trim.
Interior: Walls, hollow tile. Salesroom and restrooms, plastered ceilings and walls. Smooth hollow tile walls in lubritorium painted, ceiling plastered. Lower 4½ ft. of walls painted brown in all units, balance of walls and ceilings cream. Yellow pine woodwork in salesroom walnut stained and varnished. Red cement floors, waxed.

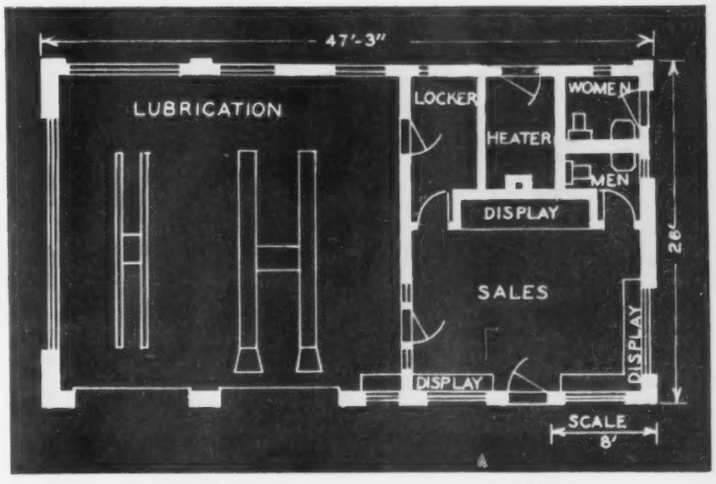
FEATURES: Building, 26 x 47, and approximately 15 ft. high, faces long side of a 65 by 155-ft. lot. Designed to place entrance to salesroom opposite pump island. Level of floor in service department 6 in. below rest of building. Illuminated display case 10 ft. wide, 2½ ft. deep, for tires and accessories built into inside wall of sales room, using space taken from men's restroom and locker room. Two service bays, drive-on and free-wheel lifts.

FLOOR AREA: 1225 sq. ft.

HEATING: Two-pipe, gravity steam system with unit heaters.

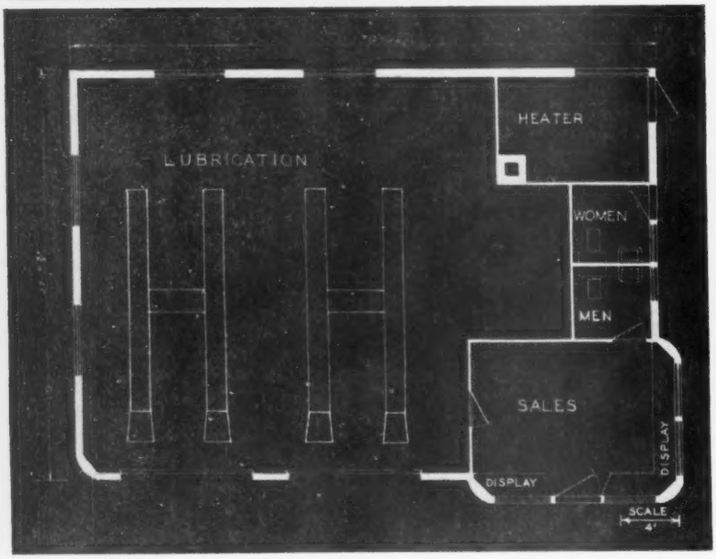
SIZE OF UNITS:

Lubritorium	24′	x 26′
Boiler room	5½′	x 8½′
Locker room	5½′	x 8½′
Restrooms	W. 5′	x 6′
	M. 5′	x 6′



ADDED DEPTH IN LUBRITORIUM FOR DISPLAYS

National Refining Co., Columbus, Ohio.



MATERIALS: Insulated steel building faced with ivory colored porcelain enamel panes. Green trim in base, coping, band above windows. Flush type steel panels in walls and partitions—Ivory painted, green trimmed. Steel-roof deck and 1-in. waterproofed insulation

FEATURES: Illustrating the trend toward deeper lubritoriums, two-bay unit at this station is 26 ft. deep, with lifts centered 12 ft. in from front providing 7 ft. in clear across back of unit for merchandise display. Almost blank rear wall—high overhead windows used effectively with shelving for display purpose. Open recess, 10 ft. wide and 5 ft. deep, in back of sales room provides out-of-the-way yet convenient location for battery charger, air compressor, and other auxiliary equipment. Projection of sales room 15 ft. at front and side adds floor space to this room and contributes to display advantages of four windows, 3 ft. 7¾ in. wide and 6 ft. 10 in. high.

FLOOR AREA: 1160 sq. ft.

SIZE OF UNITS:

Office	10½′	x 14′
Lubritorium	25′	x 26′
Heater room	7′	x 10′
Restrooms	W. 5½′	x 5½′
	M. 5′	x 5½′

HEATING: Coal fired, hot air system, with blower.

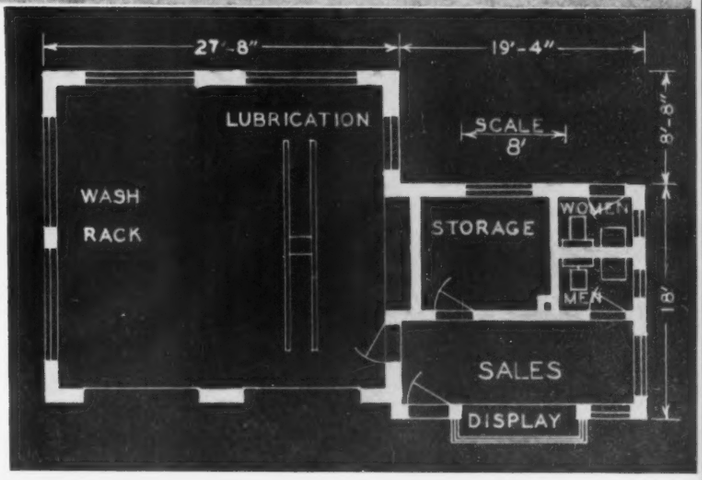
BRICK IN MODERNISTIC DESIGN

MATERIALS: Exterior vitrified buff brick—bull-nosed for corners. Interior finished with hard-burned common red brick laid up with a tooled joint which is given several coats of varnish as an aid to cleanliness.

FEATURES: Includes provisions for one or more service bays. Usual design is for separate washing and lubrication facilities, although occasionally one room serves as a combination unit. Storage room houses air compressor, battery charger, canned oil rack, and station supply lockers.

Projecting show window, 10 ft. wide and 3 ft. deep, for increasing effectiveness of merchandise display. A 2 by 8½-ft. work bench is out of the way in an alcove along inside wall of lubritorium.

Mid-Continent Petroleum Corp., Oklahoma City.



FLOOR AREA: 1058 sq. ft.

SIZE OF UNITS:

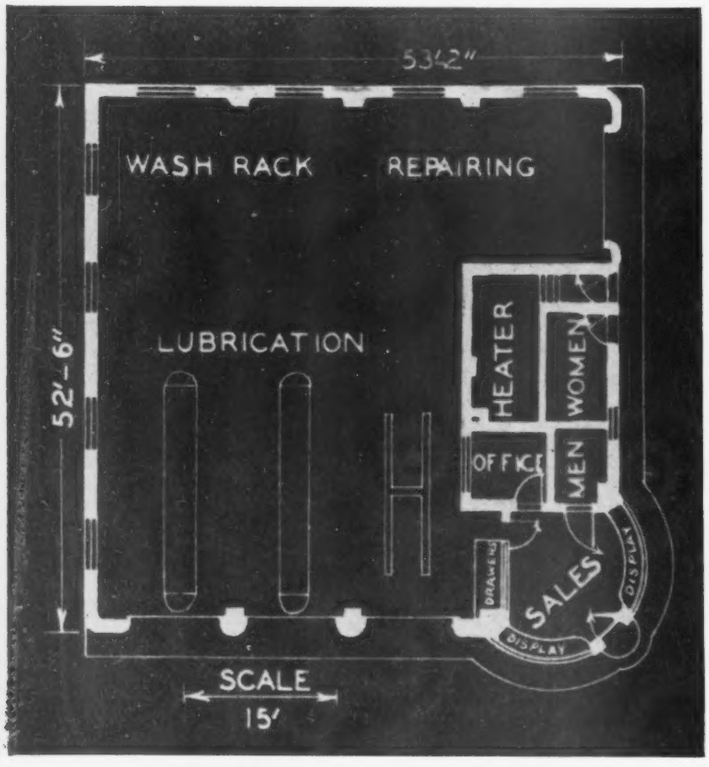
Inside Dimensions in Feet	
Service Bay	23' x 27'
Storage Room	8½' x 10'
Restrooms	W. 4½' x 6'
	M. 4½' x 6'

British American Oil Co., Ltd., Toronto, Ont.

HEATING: Hot water system.

FLOOR AREA: 2756 sq. ft.

SIZE OF UNITS:	Service Dept.	36½′	x	49′
	Repair Recess	15′	x	15′
	Heater room	7′	x	14½′
	Private office	6′	x	7½′
	Restrooms	W. 6′	x	9′
		M. 5′	x	7′



MODERN FACILITIES FOR BOTH TRUCKS AND CARS

MATERIALS: Exterior: Walls, concrete block, stucco finish; roof, hopper type, built-up asphalt; trim, aluminum bands and galvanized iron sign on steel frame with B-A raised aluminum letters. Green base, ivory walls, red coping and aluminum bands.

Interior: Office, plastered walls and ceiling, ivory; light mahogany colored woodwork and trim; floors and base trim, green and white tile.

Lubritorium, plastered walls and ceiling, ivory except 3½ ft. green wainscot; gray floor, red tile runways.

Restrooms, white tile floors and walls to height 3½ ft., green cap and cove plastered walls.

FEATURES: Located on 92 x 111 corner lot in congested, semi-residential and business area, station combines clean-cut lines and simplicity of style with modern design and utility. Yard, and service facilities visible at all times from office. Compact layout provides room for repair facilities at rear, in addition to 3-bay lubritorium and wash rack. Merchandise displays emphasized by two large circular windows in outer office. Two pits and a lift provided for handling both truck and car business.

ENGLISH TYPE

IN GLAZED BRICK

MATERIALS: Exterior: White glazed brick walls, green asbestos shingle roof, green glazed brick base and No. 1 smooth red-faced brick trim, metal passage doors and wood overhead doors.
Interior: Salesroom, plaster walls and ceiling, painted white; green wainscot, maroon cement floor and base. Lubritorium, Buff, salt-glazed twin brictile walls, white plastered ceiling and natural color cement floor and base. Restrooms, green ceramic tile floor and wainscot trimmed in black, white plastered walls and ceiling.

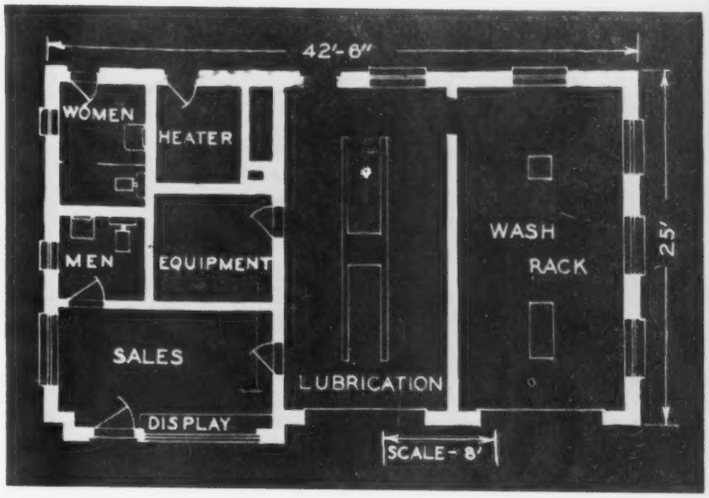
FEATURES: Featuring English type architecture for restricted residential areas, this station is located on corner lot 100 x 80 ft. with pump islands on the two intersecting streets. Features of the layout include a large equipment and supply room opening off two-stall service department. Two display windows, 7 ft. 11¼ in. x 4 ft. 8 in. and 5 ft. 7¾ in. Display shelf 18 in. deep.

HEATING: Steam system—blower type unit heaters in lubritorium, radiation in other units.

FLOOR AREA: 1062 sq. ft.

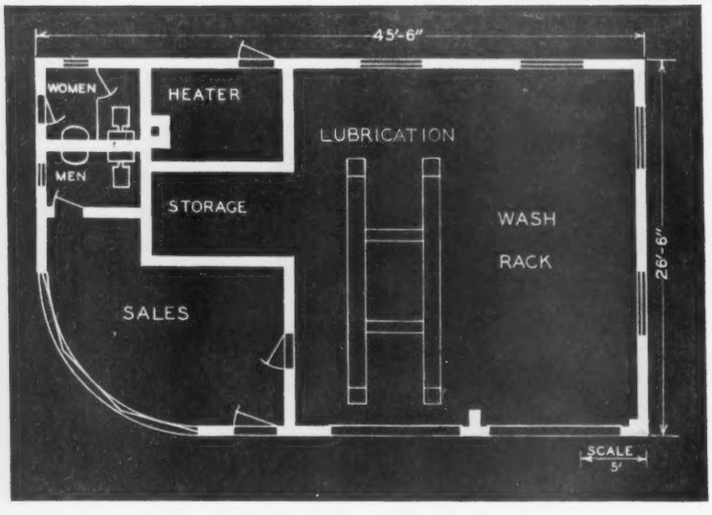
SIZE OF UNITS:

Sales room	8½′ x 15½′
Service Dept.	23′ x 24½′
Storage	8′ x 8½′
Heater room	7′ x 8½′
Restrooms	W. 6′ x 9′
	M. 6′ x 6′



Continental Oil Co., Belair Rd. and Erdman Ave., Baltimore.

Cities Service, 3rd & Jay Sts., La Crosse, Wis.



STYLE IN APPEARANCE WITH BRICK AND STUCCO

MATERIALS: Brick throughout, white stucco finish on outside. Built-up, composition roof. Salesroom, brick metal lath, plastered and painted white with gray trim and dado. Plain bricks in lubritorium painted white with gray dado; and restrooms finished with wire lath, plastered and painted white with gray trim.

FEATURES: Storage for equipment and supplies required in lubritorium provided by 6 x 10 room opening off service department. One, three-section plate glass window for display of merchandise features curved front to salesroom.

HEATING: Oil burner with forced hot air system.

FLOOR AREA: 1200 sq. ft.

SIZE OF UNITS:

Service Department	25′	x 25′
Heater room	7′	x 10′
Store room	6′	x 10′
Restrooms	W. 4′	x 7′
	M. 5½′	x 7′

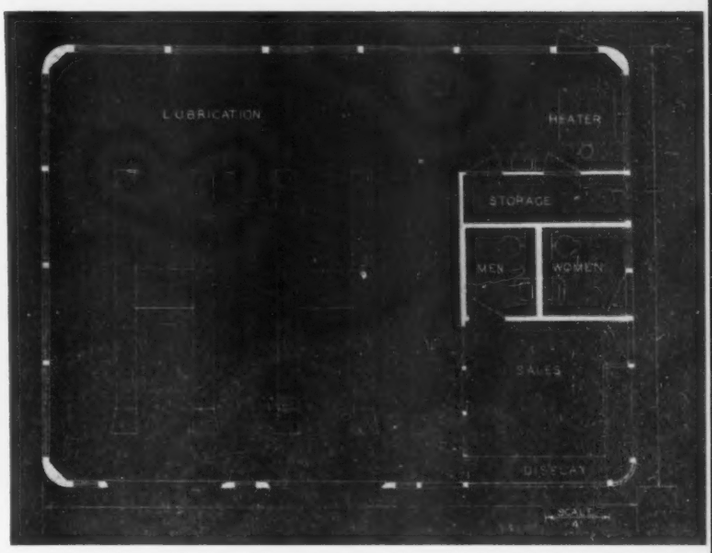
VISIBILITY WITH ALMOST A GLASS HOUSE

MATERIALS: Exterior, prefabricated steel framework in combination with wide horizontal panes of glass on three sides—including overhead doors and front corners. White porcelain enamel surfacing, including window trim, section of building above windows and face of patented light band. Exterior is white with red horizontal top band and lettering, blue base. Interior white throughout.

FEATURES: Effective use of glass in exterior construction, plus wide windows between salesroom and lubritorium provides maximum visibility from within or without station. Light thrown on station from within projecting light band accents "show-case" design. Display window 24 ft. long, front and side of salesroom. Floor of lubritorium 6 in. below rest of building. Center line of lifts 12 ft. 6 in. in from front of foundation, 7 ft. 5 in. in from side foundation. Street sides of corner lot, 243 and 165 ft. Rear and other side 130 and 147 ft. Large parking lot; station in shopping district.

HEATING: Oil fired, forced hot air system.

FLOOR AREA: 1000 sq. ft.

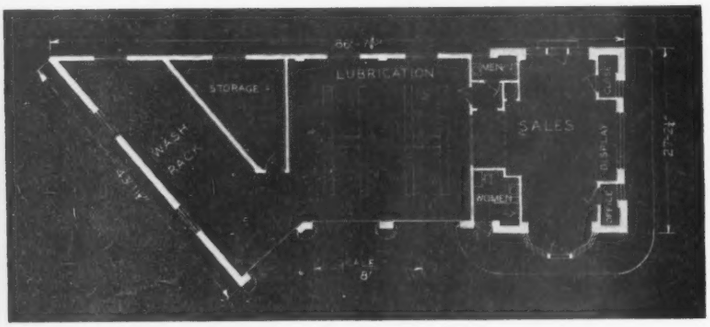


SIZE OF UNITS:

Sales room	10′ x 10′
Service Dept.	25½′ x 27′
Heater room	7′ x 10′
Store room	3′ x 10′
Restrooms	W. 5′ x 5½′
	M. 4½′ x 5½′

Standard Oil Co. of Ohio. Bradley & Pearl Sts.. Cleveland.

EFFECTIVE LAYOUT USES ADVANTAGES OF TRIANGULAR LOT



MATERIALS: Exterior: Walls concrete block, stucco finish. Roof, slag on wood shingles. Base, concrete. Trim, porcelain enamel metal. Color scheme, white, buff block, yellow and blue cinder concrete and porcelain trim.
Interior: Salesroom, plaster on concrete block, white ceiling, red concrete floor, light blue walls, medium blue wainscot, black base 6 inches high.
Lubritorium, concrete block painted same as salesroom
Restrooms, plaster on concrete block, white ceiling and trim, light blue walls, red floors.

HEATING: Gas unit heaters.

FLOOR AREA: 1960 sq. ft.

SIZE OF UNITS:

Inside Dimensions (in feet)	
Two stall lubritorium	24′ x 24′
Store room (three sides)	16½′ x 21½′ x 17′
Washing Bay	12 wide. Sides 32 and 42
Restrooms W.	7′ x 7½′
M.	4½′ x 7′
Private office	3′ x 6′
Closet	3′ x 6′

FEATURES: Designed to fit a triangular shaped lot, 161′ x 122′ x 111′, the compact arrangement makes effective use of otherwise waste space. Building backs on narrow width of lot, with outside wall of washing Bay along the 161-ft. property line. Large storage space is provided in triangular room between washing Bay and two-stall lubritorium.
Large display window, 8′ 7¾″ wide and 6′ 10″ high. Porcelain enamel metal Caduceus, panel and lettering over entrances. Effective use of glass in metal frames for entrances.

Sun Oil Co., Baum & Negley Ave., Pittsburgh, Pa.

Pan American Petroleum & Transport Co., Washington.

CUPOLA AND COLONIAL DOORWAY FEATURES SOUTHERN DESIGN

MATERIALS: Brick walls; asphalt shingle roof; wood trim. Salesroom, white plastered walls and ceiling, tile floor. Lubritorium concrete floor, cream tile walls. Restrooms, white tile walls and floor; sanimetal partitions.

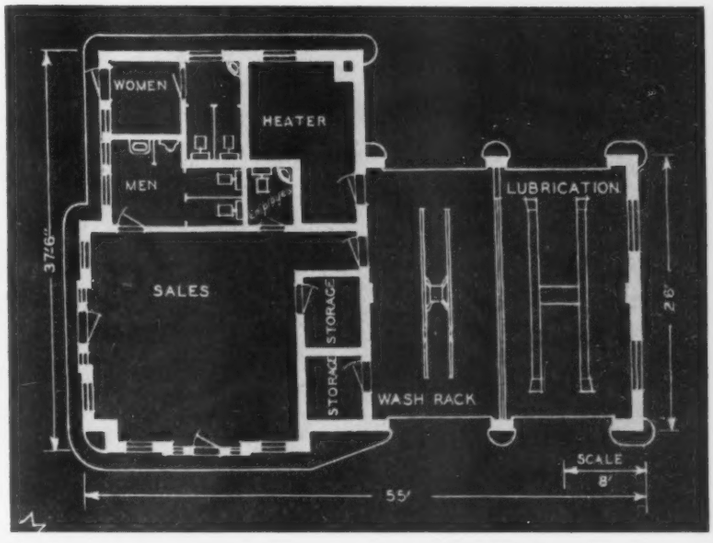
FEATURES: Two drive-thru service bays—equipped with one free-wheel and one drive-on lift, with the former serving dual purpose of lubricating and car washing. Low partition separates two bays. Three separate toilet rooms, including one for station employes. Public rooms each feature two stalls, with attractive powder room for the ladies including built-in mirror and dressing table and modernistic furniture. Separate storage provided for sales and service. Car washing and compressor equipment located in extra large heating room.

HEATING: Oil fired, hot water system.

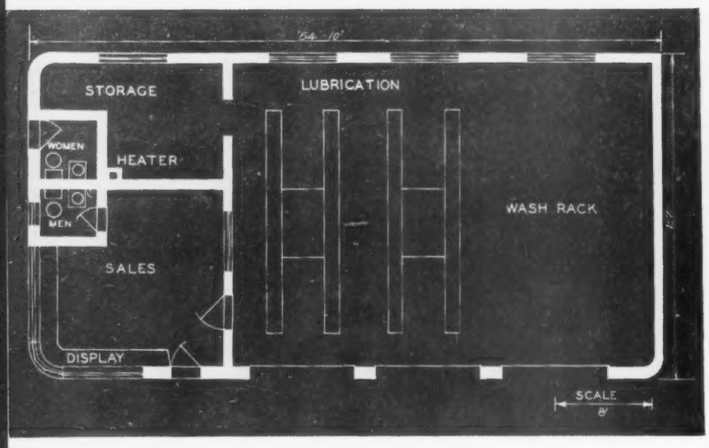
FLOOR AREA: 1500 sq. ft.

SIZE OF UNITS:

Sales	20′ x 20′
Service	23′ x 25′
Sales storage	5½′ x 6′
Service storage	5½′ x 5½′
Heater room	10′ x 15′, with corner out for
Employe's restroom	4½′ x 5½′
Public restrooms	W. 8′ x 13′
	M. 6½′ x 13′



LOW MAINTENANCE WITH GLAZED SURFACES



MATERIALS: White glazed brick exterior, green trim and base; bull nose brick at all corners and edges. Porcelain enamel lettering, neon lighted. All interior walls ceramic glazed tile, green trim in salesroom.

FEATURES: Improvements over previous design include larger office and waiting room, with window in office partition between lubritorium: sitting room in ladies restroom discontinued and space used to enlarge store room and office display windows. Narrow glass supports at corner increase effectiveness of continuous show window. Air outlet located on outside wall at left of display window. Combination heater and storage room enters into 3-bay service department.

SIZE OF UNITS:

Sales room	14½′	x	15½′
Service Dept.	25′	x	35′
Heater & Storage	9½′	x	15½′
Restrooms	W. 5′	x	5′
	M. 4′	x	5′

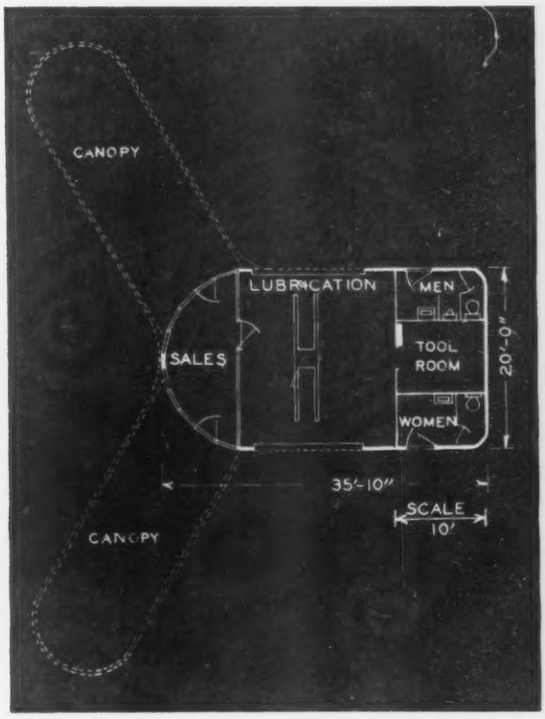
HEATING: Gas fired, unit heater.

FLOOR AREA: 1475 sq. ft.

Canfield Oil Co., Cleveland.

Standard Oil Co. of California. San Francisco.

FLEXIBLE ARRANGEMENTS WITH CANOPIES



MATERIALS: Building, 16-gauge galvanized steel, coping porcelain enamel; white with blue coping, red base and pumps.

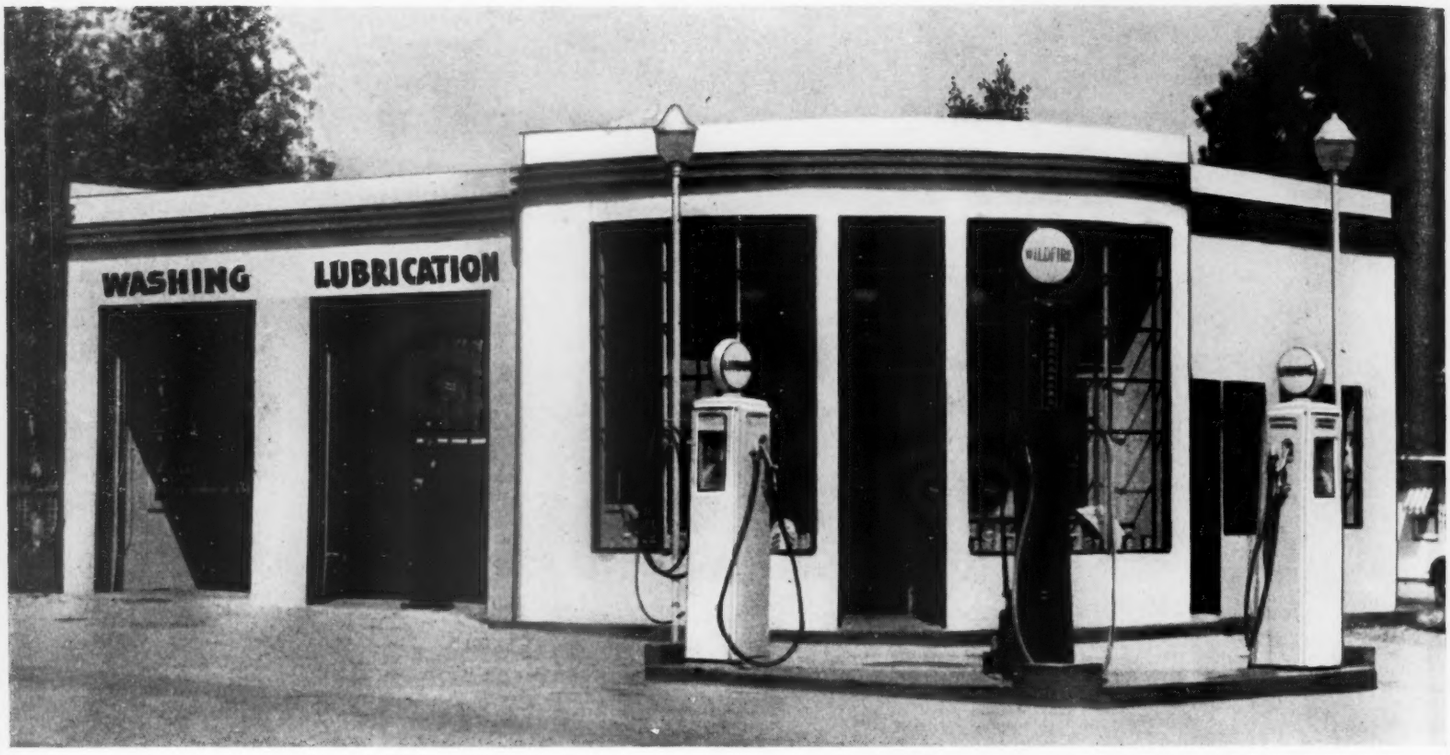
FEATURES: Distinctly functional design, insuring long architectural life and permitting many plan arrangements without loss of identity. Large tool and equipment room opening into drive-through lubritorium, separates men and women rest rooms. Good visibility between sales and service facilities and an abundance of natural light in the salesroom is provided by effective use of glass around the semi-circular front and across the rear of this unit.

SIZE OF UNITS:

Service Dept.	17½′ x 19′
Tool room	8′ x 10′
Restrooms	W. 5½′ x 10′
	M. 5½′ x 10′

HEATING: None—Circulating hot air system with oil burner where climatic conditions require it.

FLOOR AREA: Less than 700 sq. ft., not including area under canopies.



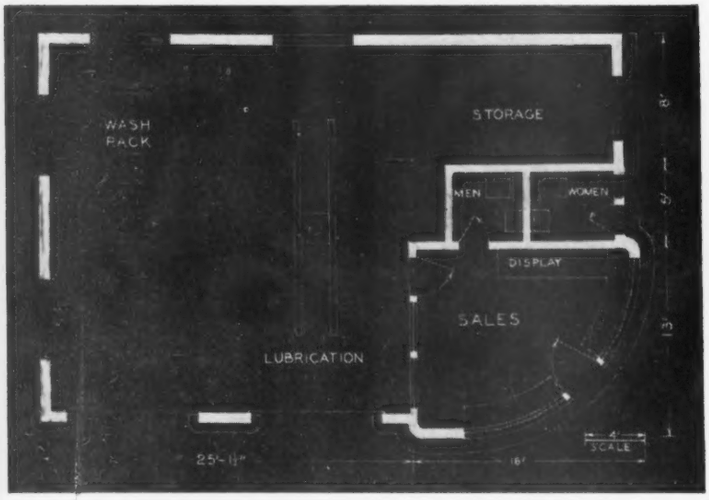
Yale Oil Corp., Sovereign Service Station, Libby, Mont.

MODERN DESIGN AT LOW COST

MATERIALS: Wood construction, 1-in. wood sheathing on exterior covered with three coats of stucco on metal lath. Roof, three-ply, built-up felt and asphalt on 1-in. deck. Color scheme, yellow with maroon trim.

Salesroom, pressed-board walls and insulating-board ceiling, painted light green with dark green trim. Rest rooms, 4-foot wainscot of asbestos flexboard, remainder of wall and ceiling, pressed board, painted light green. Lubritorium, plywood walls and ceiling.

FEATURES: Cost less than $4000; one of 12 stations of this type recently built by company. Layout permits enlargement or extension to meet requirements of location. Merchandise display space provided in modern station front by two windows, each 7 ft. 6 in. wide and 9 ft. 6 in. high, lighted with fluorescent fixtures. Convenient lubrication and car washing facilities separated from sales room by glassed-in partition. Room designated as "Storage" available as extra lubritorium, tire or battery department, not separated from service bays.



HEATING: Hot water system. Heating plant installed in corner of storage room or in basement, as sometimes provided.

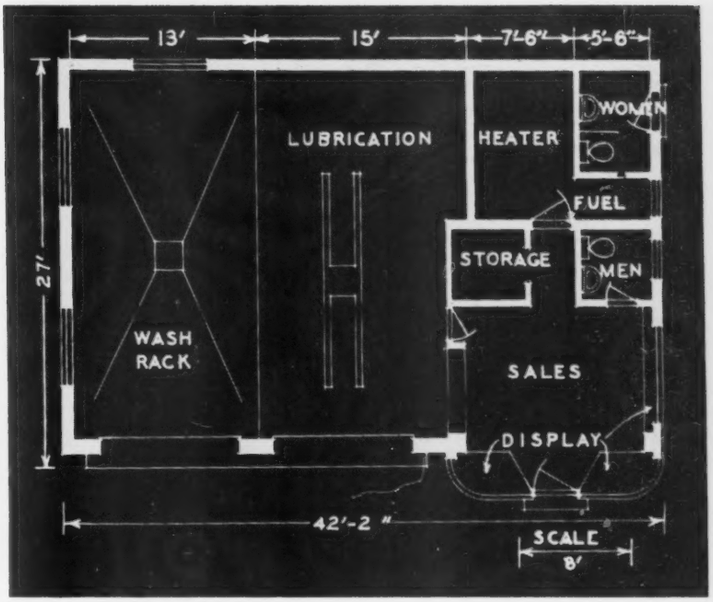
FLOOR AREA: 1000 sq. ft.

SIZE OF UNITS:

Service Dept.	25' x 27'
Store room	9' x 14'
Restrooms	W. 5' x 6'
	M. 5' x 6'

CANADIAN STATION

FEATURES DISPLAYS



MATERIALS: Walls, 8-in. cinder block, stucco white inside and out; 2 ft. 4 in. black stucco base on exterior; steel sash, wood roof. Wood letters and 2-in. band at coping brilliant red; Red Indian Head.
Salesroom and lubritorium, white plastered walls and ceiling; black base, radiators and minor trim; Terra cotta red floor. Restrooms, white plastered walls and ceiling, red and black trim, white tile 4 ft. dado, Terra Cotta red floor.

FEATURES: Station shown resembles outside appearance of standard design recently developed and adopted by company. However, in standard type, as illustrated by floor plan, entrance to men's restroom is now from inside office. Average cost $5500 including one hoist, hot-water heating system, concrete pump island, other minor equipment and furniture. Rounded projection of office with curved glass corners features display facilities. Horizontal lines predominate in modern design.

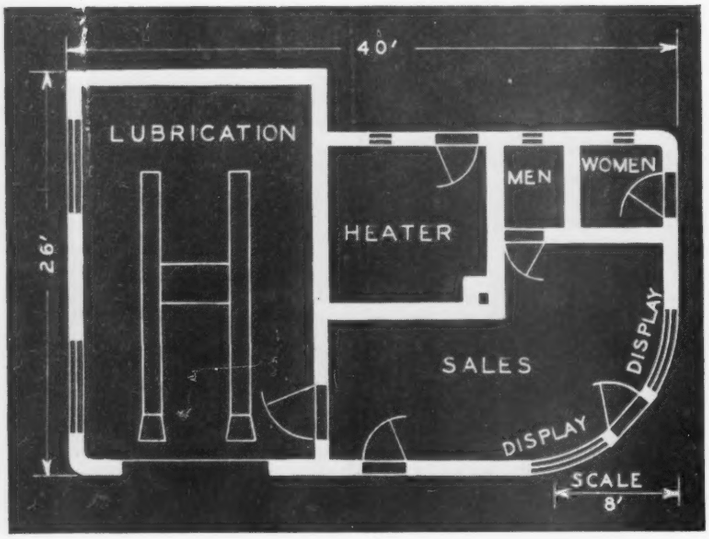
HEATING: Hot water system.

FLOOR AREA: 1134 sq. ft.

SIZE OF UNITS:

Service Dept.	25' x 26'
Heater	7' x 10'
Fuel room	3' x 5'
Storage	5' x 5'
Restrooms	W. 5' x 7'
	M. 5' x 5'

McColl-Frontenac Oil Co., Ltd., Strathroy, Ontario.



COMPACT AND EFFICIENT

MATERIALS: Common brick, faced front and side with ivory porcelain enamel steel; ultramarine blue base and vermilion red top bands. Stainless steel sash combined with 1/4 in. plate glass, mitred corners set with green cement, to increase display advantages of double windows. 4-ply asphalt roofing on 1 x 6-inch roof boards. Interior of salesroom and lubritorium, walls are light buff blazed bricktile. Restroom walls variegated bisque field tile wainscot, black cove base, red stripe top and bottom; dark bisque border—extended around wall mirror in ladies room; glazed buff brick tile above wainscot.

FEATURES: Compact design with combination lubritorium and wash rack; central heating room located between service department and restrooms. Located on property 90 x 100, station building is 19 ft. away from side property line with room provided for addition of a second bay. Displays are featured in windows on each side of entrance—curved front has a 12-ft. 8-in. radius.

HEATING: Oil burner, hot air system.

FLOOR AREA: 950 sq. ft.

SIZE OF UNITS:

Service Dept.	14' 3" x 24' 7"
Heating room	9' 11" x 9' 7"
Restrooms	W. 5' 7" x 5' 7"
	M. 4' 6" x 5' 7"

Standard Oil Co. of Indiana.

CURVES FEATURED IN ATTRACTIVE DESIGN

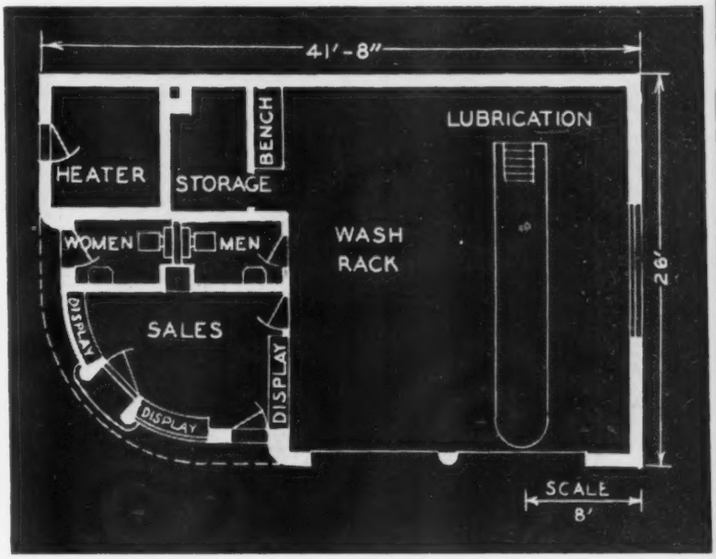
Imperial Oil Ltd., Montreal, Canada.

MATERIALS: Foundations and walls, concrete block, white stuccoed exterior finish, plastered inside; blue base red bands and coping. Salesroom and lubritorium, blue wainscot, maroon stripe, light ivory walls and ceiling. Rest rooms, white tile wainscot, ivory walls and ceiling.

FEATURES: Rounded salesroom front with curved glass display windows 4½ ft. wide and 8 ft. high. Red banding carried over the windows as a canopy. 6 ft. display window in partition between sales and service units. Essentially a functional design, arrangement combines utility with attractive, modern appearance. Located on corner lot, 90 x 125.

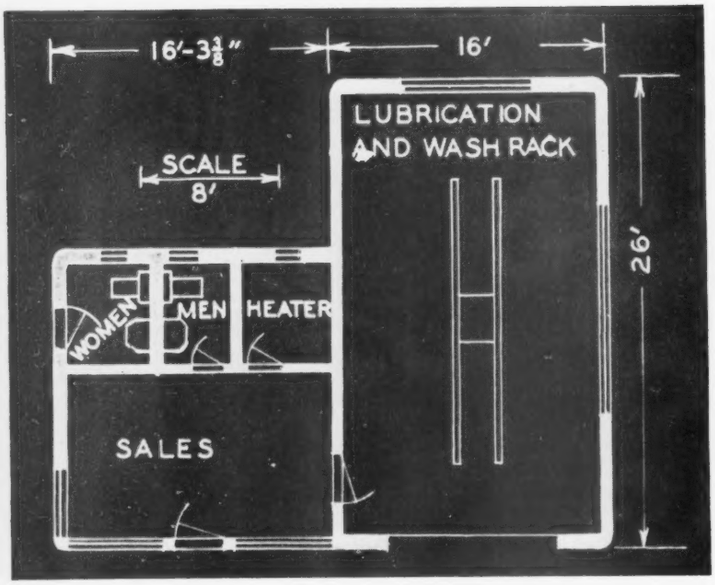
HEATING: Hot water system, unit heater in lubritorium—concealed radiators in other units.

FLOOR AREA: 1075 sq. ft.



SIZE OF UNITS:

Service Dept.	23½' x 26'
Storage	4½' x 8½'
Heater room	7½' x 8'
Restrooms	W. 4½' x 7'
	M. 4½' x 7'



FLOOR AREA: 881 sq. ft.

SIZE OF UNITS:	Salesroom	9' x 15'
	Service Dept.	16' x 26'
	Restrooms	W. 5' x 5½'
		M. 4' x 5½'

COMPACT ARRANGEMENTS FOR STRATEGIC LOCATION

MATERIALS: All steel, double insulated walls, painted light cream with green trim, inside and out, except for rest rooms, which are painted cream overall.

FEATURES: Compactness combined with strategic location on a corner lot with four sides of unequal length—120 x 100 x 94 x 27. Salesroom side of building 13 ft. in from 100-ft. property line and rear of lubritorium 6 ft. from 94-ft. side with station facing 24-ft. approach over shortest side. Other approaches from intersecting streets on two long sides, 40 ft.
Three merchandise display windows—6 ft. wide and 8 ft. high—in salesroom front. Large windows on two sides of combination lubricating and car washing unit.

HEATING: Hot water system.

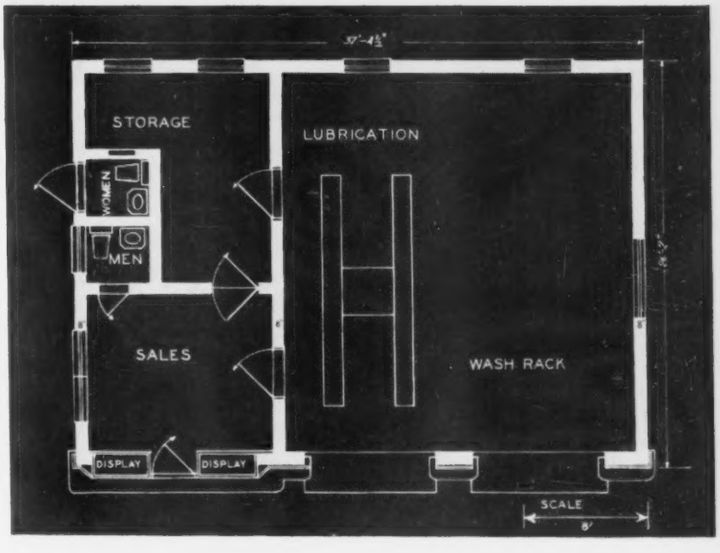
Deep Rock Oil Corp., Stevens Point, Wis.

Republic Oil Co., Pittsburgh, Pa.

ATTRACTIVE APPEARANCE AND EFFICIENT OPERATION AT LOW COST

MATERIALS: Exterior: 12-in. concrete block, faced on front and left side with white brick. Roof, four-ply built up asphalt. Base, concrete colored red and troweled smooth. Color scheme, red, white and blue. Wood overhead doors to lubrication and car washing rooms.
Interior: Salesroom, white plastered walls, red trim. Lubritorium, white glazed tile three sides 6 feet high; ceiling and walls white plaster. Restrooms, white tile. All floors red colored concrete.

FEATURES: Building dimensions, 37 ft. 4 in. x 26 ft. 2 in.
Conservative type structure offering necessary conveniences, attractive appearance and economical operation. Particularly large storage room with entrance from both sales and service units. Metal shelving accessory display and glass show case in sales room. Two window displays, 4.5 ft. wide and 7 ft. high. Signs, porcelain and enameled wood cut outs.



HEATING: 975 sq. ft.

FLOOR AREA: Circulating, gas, six radiators.

SIZE OF UNITS:

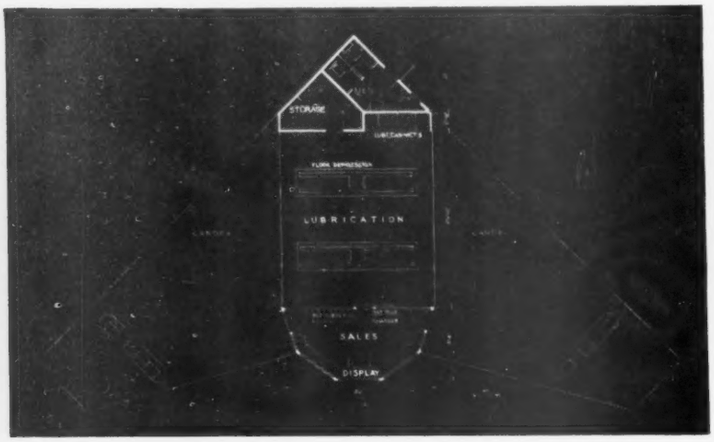
Office	12′ x 10′
Lubritorium and washing	25′ x 25′
Storage Room	12′ x 13½′ including
Restrooms	W. 4′ x 4½′
	M. 4′ x 4½′

Union Oil Co. of California, Wilshire and Ocean Blvd., Santa Monica, Cal.

EFFICIENCY IN CANOPIES AND ANGLES

MATERIALS: Exterior and Interior: Walls, partitions, canopies, and roof, one thickness of 16-gauge galvanized sheet iron supported by structural steel members. Exterior color scheme, orange foundation, white walls with blue trim. Salesroom interior all white, lubritorium white with 18-in. blue base. Restrooms, all white.

FEATURES: Triangular shape; 66 x 66, on right angle dimensions; approximately 78 feet across hypotenuse formed by front of station and canopies. The equal sides parallel property lines of 100 x 110 ft. lot, with ends of canopies flush with sidewalks. Effective use is made of space in right-angle corner back of two-hoist lubritorium for store room, men's restroom and alcove for lubricating cabinets. Women's restroom, in separate building—9½ ft. square—at rear of asphalt-paved yard. Compact sales room with glass on all sides affording complete visibility of pump islands, street approaches, lubritorium and most of yard. Five display windows, approximately 6 ft. 6 in. wide by 6 ft. high, in projecting front of this room. Large, open lubrication room, conveniently located to both pump islands, providing easy approach from both streets and efficient service features. Porcelain enamel lettering on canopies.

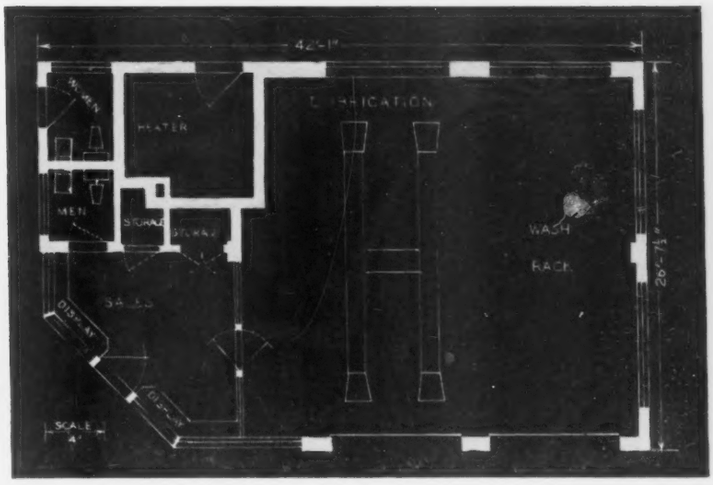


FLOOR AREA: Approximately 1000 sq. ft., including separate women's restroom but exclusive of area under canopies.

SIZE OF UNITS:

Lubritorium	22′ x 25′
Sales room	10.5′ x 22′
Storage	8.5′ x 8.5′ x 12′
Restrooms	W. 9.5′ x 9.5′
	M. 6.5′ x 14.5′ x 6.5′ deep

PARAPET RUNNER SIGNS IN PORCELAIN ENAMEL



MATERIALS: Walls; common brick, Grade B white glazed brick veneer. Roof; wood sheathing, built-up roofing. Sign letters; cast aluminum. Sign background, cornice, parapet: tempered presswood or porcelain enamel. White building, red trim on parapet; doors gray and white.

Interior, salesroom: plaster ceiling and walls, plywood cabinet work. Lubritorium: painted brick walls, plaster ceiling. Color same in both units, walls gray 5 ft. high, remainder aluminum. Restrooms, plastered walls and ceilings—aluminum, except 5 ft. gray wall tile trimmed black and red. Red tile floors.

FEATURES: Glassed in sales room, providing four windows around 3-sided front—corner constructed on diagonal—and one in front wall of service bay adjacent to sales room—each 4 ft. 2 in. wide and 6 ft. 2 in. high. Visibility between salesroom, service department and pump islands improved by full glass windows in partition. Runner signs on parapet, porcelain enamel. Outside door to heater room.

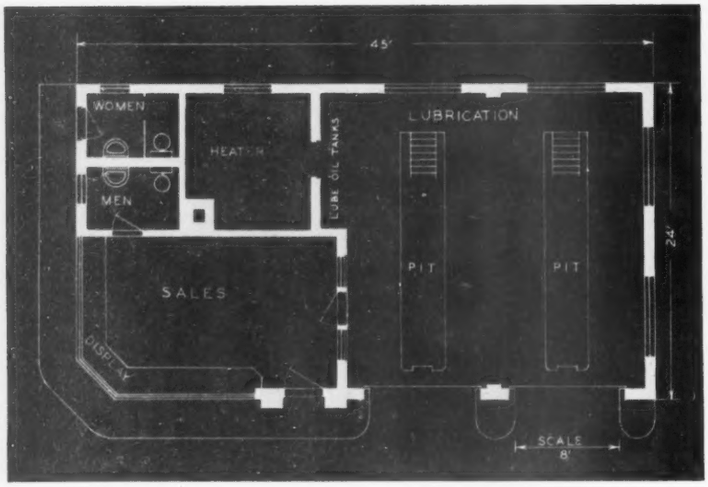
HEATING: Coal fired, hot air system.

FLOOR AREA: 1100 sq. ft.

SIZE OF UNITS:

Service Dept.	24′ x 27′
Heater room	8½′ x 9′
Restrooms	W. 4½′ x 6′
	M. 4½′ x 5′

Ohio Oil Co., Springfield, Ill.



EFFECTIVE CORNER DISPLAY WINDOW

MATERIALS: Exterior, concrete block walls, stucco finish, face brick base, galvanized iron coping, wood trim, asphalt roofing. Color scheme, white, red base and coping, red and white striping on tower, white trim.
Interior: Salesroom, ivory colored celotex walls and ceiling, cream trim.

Lubritorium: Masonry walls, painted dark gray 4½ ft. high, remainder of walls and exposed roof sheathing aluminum.
Restrooms, tile floor, base and wainscot, plaster walls and ceiling. Color scheme, butternut wainscot, black base, golden range varitone floors, white walls and ceiling.

FEATURES: Tower treatment at main entrance includes clock and projecting hood. Door at one side of salesroom allows approximately 25 ft. of continuous window display around front and side facing pump island. Cut off corner gives 5 windows of equal size. 1940 design has overall depth of 26 ft. Alcove provided for lube oil tanks on each side of entrance to heater room. Property size 100 x 100 ft.

HEATING: Warm air conditioning system.

FLOOR AREA: 1080 sq. ft. (1170 sq. ft., 1940 design).

SIZE OF UNITS:

Salesroom	11½′	x 20′
Service Dept.	22½′	x 23′
Heater room	9½′	x 10½′
Restrooms	W. 5′	x 7½′
	M. 5′	x 7½′

Colonial Beacon Oil Co., (Standard of New Jersey), Portland, Me.

More Sales Appeal

Emphasis in Station Design Today Combines Style in Outward Appearance With More Efficient Merchandising and Servicing Facilities, to Provide More Profitable Sales Tools.

By J. N. Westsmith
Engineering Editor

What today's modern service stations, as shown in the Gallery in this issue, mean to the average practical service station owner is analyzed herewith by J. N. Westsmith, NPN's Engineering Editor.

In making this analysis of the new points of these stations that appeal to the profit-making desires of the average marketing man, Mr. Westsmith draws on not only his training as an engineer but also his personal experience in operating his own national branded service station for several years in Los Angeles.

OIL marketers building service stations today are getting more for their money but, on the whole, are spending more for each station.

This is another way of saying that recognition by marketers of the value in facilities which offer more in the way of appearance, convenience, efficiency, sales appeal, better housekeeping, and lower operating and maintenance costs, has resulted in a willingness to spend more per average installation. There are several reasons for this, including:

1. No half-way or temporary building methods are justified today. If new construction is warranted at all, it will merit an expenditure that will insure success in the face of present or future competition.

Most marketers have established some kind of a yardstick for measuring the potential gallonage or other revenue for a particular location and for determining whether the investment will be profitable.

2. Sizable investments in facilities are now considered only on locations held in fee or on long term leases. There is more incentive to capitalize on these locations with modern, up-to-date stations.

3. Today's functional type service station, by providing additional profit opportunities and reducing upkeep and maintenance costs, warrants a higher initial expenditure.

A study of stations shown on preceding pages of this issue as examples of the most modern and efficient oil company sales outlets built during 1939, illustrates the greater values bought by marketers today in their drive against obsolescence. Here careful engineering and pre-construction attention to overall efficiency has been combined with new merchandising appeal through appearance and design.

Some important trends indicated by a study of these modern stations, in the NPN Gallery are:

1. More care is being given to grouping and laying out facilities in the interest of more efficient operation—to cut down steps, improve visibility, make use of otherwise waste space.

2. Glass is finding wider use in station fronts, including the more efficiently designed display windows, overhead doors, and in the partitions between sales and service rooms.

3. Acceptance is growing for smooth surfaced building materials which once installed, even at a slightly higher initial cost, blend with modern design and do not require subsequent painting or high maintenance cost.

4. Service bays are wider and

Characteristic of the new prominence given displays in the modern service station, this projected salesroom features wide windows and an entrance door of the same design, effective illumination and inside wall displays. The large window between the sales and service rooms has 2 wide glass shelves. Front of display room is 16 feet from pump island

deeper to provide more elbow room between cars on the lift or wash rack and the increasingly important displays of equipment and merchandise.

5. Provision of an alcove or extension to service facilities is finding favor for utility purposes, such as location of a work bench, or for storage of auxiliary equipment not actually on display.

6. An increased number of station designs include addition of a clothes closet or locker for the use of station employes.

7. Greater prominence is being given display windows as a means of increasing the number and importance of contacts between customers and merchandise.

8. Modern design is making effective use of overhead shelving around walls of the service bays and of racks suspended from the ceiling for combined display and storage purposes.

9. Greater attention to station lighting inside and out, is increasing the effectiveness of modern building materials and the "show-case" characteristics of the new window displays.

10. Wider acceptance is given to providing for entrance to the men's restroom through the salesrom and for entrance to the outside women's room at the side of the building adjacent to display window and away from the service bays.

Compactness is an essential detail of the modern station. The average floor area of a unit with 2 service bays ranges from 1100 to 1200 square feet. More space is given to facilities such as service and display, which contribute to more profitable operation, and space is efficiently conserved in the utility departments.

Where heat is required, the trend is toward systems which require a minimum of space and attention. As far as possible, unit heaters for the individual rooms are suspended from the ceiling. Space saved in the heater room has been a gain for storage accommodations.

In some cases, steps are saved by providing separate storage facilities for the service and sales rooms. However, the trend is apparently toward one store room, opening off the sales unit, with merchandise likely to be required in the lubritorium stored on display shelving around the walls, or suspended overhead from ceiling racks in the service department.

One popular arrangement in this connection favors an almost blank rear wall in the service bays, with the display shelving and cupboards attractively arranged on either side and above a central display of lubricating equipment. When used in conjunction with overhead racks, this arrangement provides unusually large storage space and uses it effectively to put merchandise out where the customer can see it.

Glass is proving to be the modern station designer's friend, especially when combined with the architectural lines and highly polished building surfaces of modern construction. Horizontal panes featured in overhead doors of lubritoriums and in the exterior walls of sales rooms, accentuate lines carried out by the rest of the building. Narrow sash and frames provide excellent visibility through these window sections.

IN keeping with the pronounced trend to make the station's display windows more effective tools in the merchandising of extra-profit products and accessories, the display space is shedding its cloak of obscurity. Facing and within easy view of motorists at the pump islands, it is designed to say, in effect, "Look at me, I've got something worth seeing."

This is being accomplished in a number of ways, but the objective is the same. One of the most common methods is to cut off, or round off the corner to the sales room, and move the entrance to the side near the service bays. This makes a continuous display possible for almost the entire outside circumference of the sales room —in some cases upward of 25 feet.

Since visibility is an important fac-

A modern lubritorium on parade. There is no secret about what goes on in this service department, where good housekeeping is a necessity. In the waiting room of this station, customers can watch—and be impressed—by the service on their cars

It pays for itself

Many a refiner who thinks he can't afford a Dubbscracking unit is really paying the price of one just the same—and then some

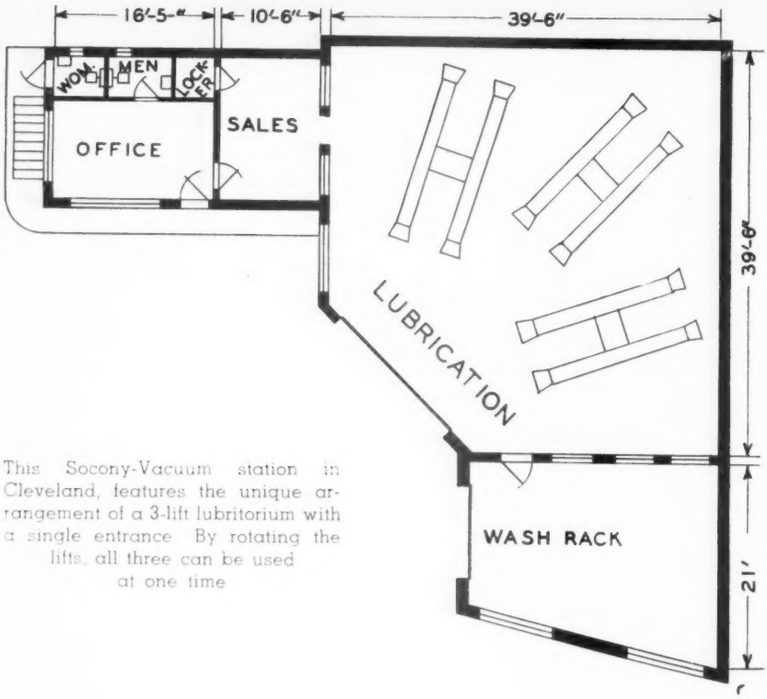
Every refiner, large or small, can afford a Dubbscracking plant because it pays for itself in increased yield and improved quality of products—especially octane rating—and doesn't take long to do it

Here's a suggestion:

Start building a Dubbs unit now and have that extra good Dubbscracked gasoline to sell when the motoring season starts

Universal Oil Products Co
Chicago, Illinois

Dubbs Cracking Process
Owner and Licensor



This Socony-Vacuum station in Cleveland, features the unique arrangement of a 3-lift lubritorium with a single entrance. By rotating the lifts, all three can be used at one time

tor, the windows are made as wide asto possible, obstructing corners or supporting members are refined to narrow dimensions, or eliminated entirely at some points by use of mitred glass, cemented and clamped together.

PERHAPS one of the most promising methods for adding emphasis to these display windows, is by a projection of the sales room on one or two sides. Examples are shown on preceding pages of this design, where bay-window treatment allows the displays to extend as much as 6 ft. beyond the regular station front.

Although built at a slightly higher cost, this constructioin serves the further purpose of providing additional floor space in the sales room. The same methods for obtaining better display visibility are also used in this arrangement.

Height of the display shelf above the inside floor level in the sales room ranges from 1.5 to 2.5 ft., and depth of the shelf is usually 2 to 2.5 feet. There is a trend against use of back boards this shelving, in the interest of better visibility and better illumination of the displays.

Improvements in design of the lubritorium and other service facilities have gone a long way toward increasing the efficiency and merchandising value of these units.

Many of the designs adopted for yesterday's service station have been made obsolete by today's need for more room in the service department. This need has resulted from a greater bumper-to-bumper length on modern cars and from the move to increase sales appeal of the lubritorium by impressive arrays of lubricating and servicing equipment. Another factor is the trend to utilize walls for the display of merchandise.

Depending somewhat upon the extent to which displays are featured in the service quarters, modern design provides for an inside depth of 25.5 to 26.5 ft. and a width of 14 to 16 ft. for each bay, with the greater dimensions now generally specified. Center line of the lift is located 12 ft. in from the inside face of the front wall and is centered between the sides—7 ft. from the side wall for a 14 ft. bay and 8 ft. for a width of 16 ft.

Other features of the modern lubritorium include the provision for more light, including larger side windows and more glass in the overhead doors. Greater visibility from other sales areas is provided through wider and lower windows between sales and service bays. Another feature of the lubritorium is the provision for an auxiliary extension to the room. This recess or alcove, which takes a variety of sizes and shapes, allows space for a work bench, lubsters, employe lockers, air compressor, or other auxiliary equipment not on display. Object is to retain full width and depth of the service room by providing an out-of-the-way place for these utility items.

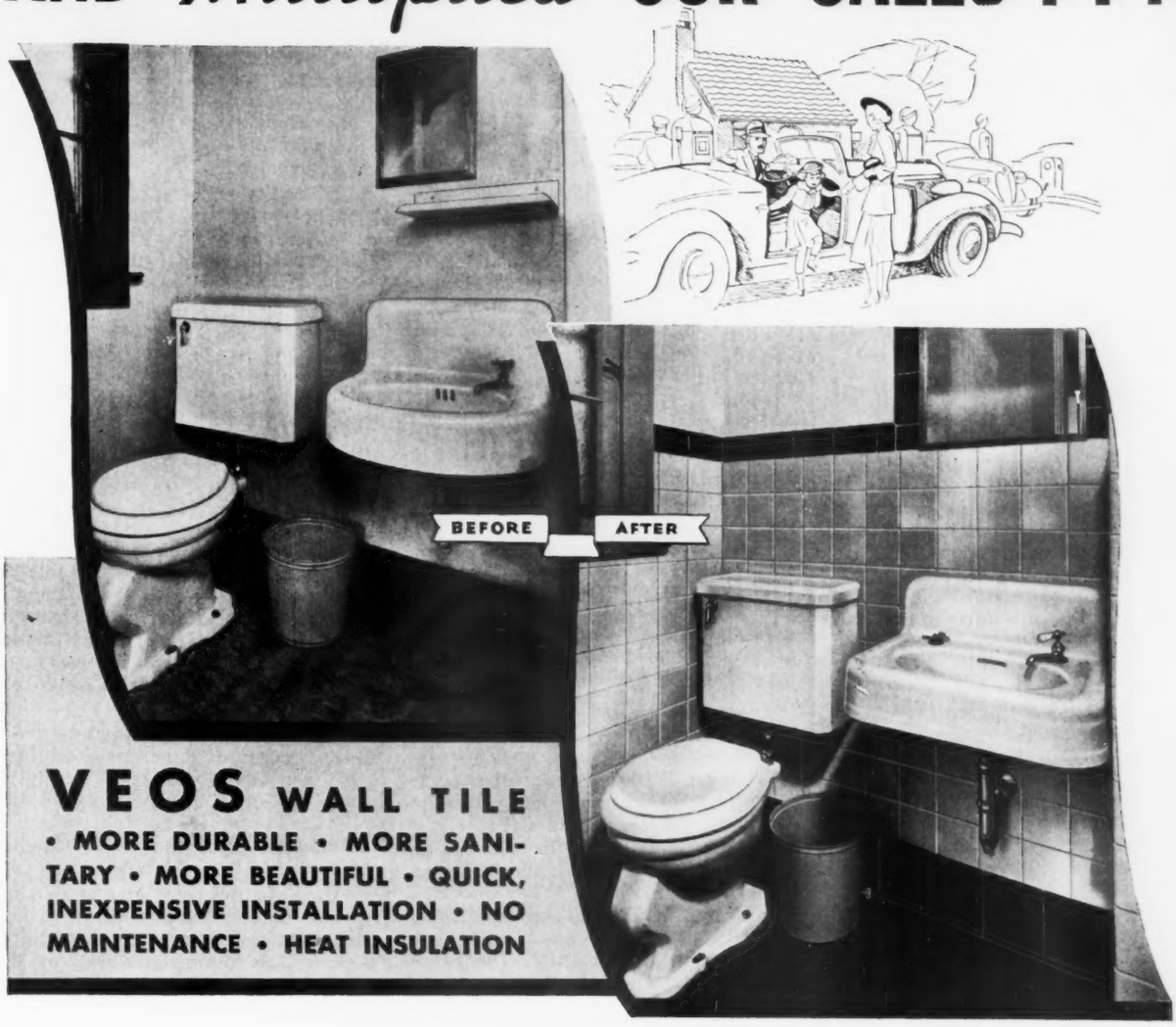
RESTROOMS have been modified in the direction of standardizing size and location. The men's room, usually entered from the sales room, averages about 4½ x 5 ft. in dimensions. At the side or backed up against this room, to reduce plumbing costs, the women's room is larger—approximately 5½ x 7 on the average—and its appointments include more in the way of modern furniture and conveniences. An exterior entrance to the women's room is usually on the side away from the lubritorium.

A discussion of the modern service station would be incomplete without mention of how new lighting developments are improving sales effectiveness at night. With the trend toward larger service station lots, the number of flood lights is being increased to give more even distribution of light.

The floodlight standards for the larger lots are not as high as with a fewer number of standards on a small lot, but the light beam is directed in a more vertical plane. Standards 20 to 25 ft. high are used here, compared to 25 or 30 ft. where fewer units are used.

Oil marketers are getting away from the use of mercury floodlighting equipment alone at stations, because of its effect in distorting the color of cars and the human complexion. The advertising effectiveness offered by the mercury light and the efficiency of this equipment is used to advantage in

WE *Modernized* OUR RESTROOMS AND *Multiplied* OUR SALES . . .



VEOS WALL TILE

• MORE DURABLE • MORE SANITARY • MORE BEAUTIFUL • QUICK, INEXPENSIVE INSTALLATION • NO MAINTENANCE • HEAT INSULATION

Veos Insulating Foundation Board is nailed on over the old wall.

Veos Glue is applied to the back of each Tile.

"It's really surprising how many people make a habit of stopping at stations that have nice restrooms . . . Girls, men alone and parents with children . . . There's certainly something inviting and reassuring about glistening restroom walls of Veos Tile . . . It provides a great opportunity for an oil man to get the goodwill and esteem of the motoring public" . . . The above is a quotation from a letter received by one of the major oil companies . . . Veos Tile can be installed right over the old restroom walls and it's absolutely permanent in every respect. Veos has the same beautiful, glossy surface as conventional clay bodied tile but Veos has a heart of steel and cannot crack, craze or sweat. Its glistening porcelain surface can be cleaned as easily as china and will attract the right kind of trade . . . Let us give you a quotation on a few sample installations and we will submit proof of results based on installations made for other leading oil marketers. Address:

DAVIDSON ENAMEL COMPANY • CLYDE, OHIO

Veos Tile is inserted in grooved pattern in foundation board.

Grouting ornaments and waterproofs the joints.

Providing spacious and attractive accommodations for the comfort and convenience of its women customers, this Pan American Oil Co. station features tile floor and half walls, metal partitions and modernistic furniture in its ladies room. This divided room is approximately 6½ x 13 feet

combination with filament lights. A predominance of filament light is used in areas such as pump islands, air and water towers, and building approaches.

Hinged poles, or poles provided with lowering devices, are favored for the modern station floodlights, for ease of maintenance.

Fluorescent lights are furnishing a new tool for capitalizing on the use of color and are finding their widest use in the sales room and display windows, although attractive and effective use has also been made of them in restrooms and the lubritorium. This equipment is highly efficient in production of decorative color and is available in seven colors: warm white, daylight, gold, pink, red, green and blue.

A NEW projector lamp, similar in principle to the new sealed beam headlights for automobiles, is being used at stations to spot displays, or for under-car illumination in the lubritorium. Manufactured in portable models, these projectors give a wide beam pattern and no glare, reducing spilled light to a minimum by an improved control.

Proper maintenance of lighting equipment is found to be particularly important in taking advantage of the showmanship offered by the modern station design, with its light colored walls and polished surfaces increasing the amount of reflected light.

When originally installed, the modern lighting system is designed to give a pre-determined level of illumination for all units, including the station yard, sales room, lubritorium, pump island and restrooms. This is the minimum required to produce the desired results. Improper maintenance immediately detracts from the show-case characteristics of the station, and means that station operators are paying for power that is not used.

A study of modern stations selected by oil companies and shown in this issue of NPN reflects the growing use of surfacing materials which combine attractive appearance with the advantages of a smooth surface that is easy to keep clean and not easily scratched or marred.

It is the opinion of architects, oil company construction engineers and service station manufacturers, that improvement in construction technique within the next few years will see even greater use made of such materials as porcelain enamel, glazed building blocks, structural glass or glass blocks.

Added to the advantages of an exterior which requires no coating, such as paint, and therefore costs less for initial application and subsequent upkeep, is the ease with which most of these materials can be fitted into the engineered type of station being built today.

Simplification of labor required in building with materials cut to fit a pre-fabricated framework, has done much to reduce costs and the amount of time required for construction. It is now possible for the oil marketer to buy one or more stations in designs and arrangements to fit any location and have it erected at a cost that will compare favorably with that quoted by the local contractor.

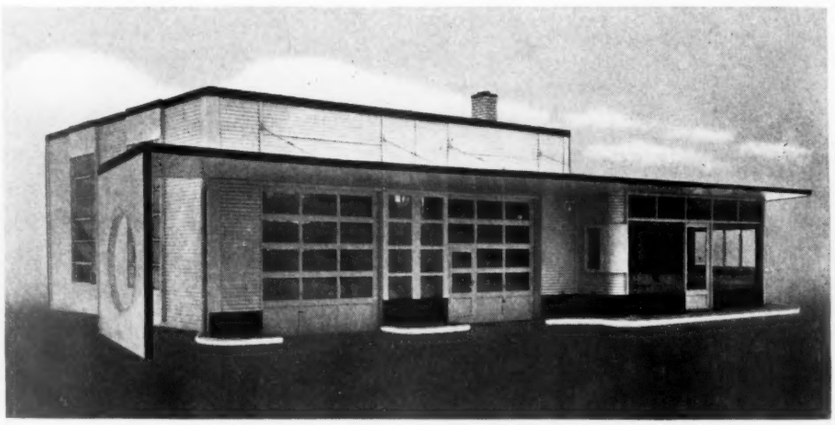
A new design for service stations which has aroused the interest of architectural magazines recently was evolved by a southern architect, who got his idea from the ripple of a raindrop in a fishpond. He designed a station which was built in Winnsboro, S. C., to illustrate the commercial practicability of his idea. When inverted this station building closely resembles in shape the splash and ripple of a raindrop hitting the water. The building is circular and has a 15-foot canopy extending all around it, centrally supported and without arches but its construction is said to differ from the cantilever design. This unsupported canopy is only 2 in. thick at the edge, has an average thickness of 3.5 in. and is designed to carry a load of 40 lbs. a sq. in. This station is said to have withstood heavy windstorms without damage. The pump mechanism at this station is in the upper part of the central shell, so that standard pump equipment of the wet nozzle control type simply has a length of insulated pipe, together with an electrically operated hose reel interposed between the pump and the nozzle.

New developments are also reported in the past year in the type of station construction in which the canopies are supported from central upright beams. This design is claimed to permit a light construction for the station building and to provide for originality of design by the use of the upper portions of the central beams for display signs or purely decorative features.

THE service station engineering department of the Continental Oil Co. of Ponca City states it has built some stations of the new functional style of architecture but that it has not found a satisfactory substitute for masonry for its needs. The development of lighter and more decorative materials which will lower the cost of canopies may lead to their greater use, in certain territories, stated Ivan B. Williams of this company.

In station building in general he believes porcelain enamel sectional buildings will find greater use in the future, also structural glass, which gives the maximum of visibility for the building at night and yet is attractive in daylight.

"Up until the past year or two, the service station failed entirely to keep step with the advancement in the design of the automobile, and for that reason the next few years may see new materials and possibly a station as



This low-cost, all-steel building was designed on the principle that a service station is, in effect, a three-dimensional billboard for the company and its products and that, therefore, it should present the maximum frontage on the highway. The extension of the canopy adds frontage to the station

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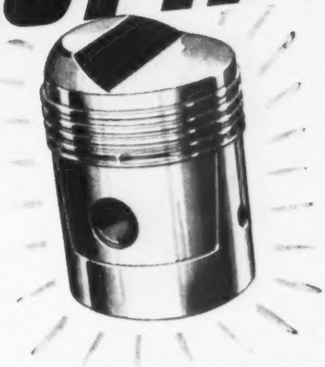

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Our own YMAC Time Payment Plan assures you of lowest available rates

GMC TRUCKS

GASOLINE DIESEL

streamlined as the newest car", Mr. Williams stated.

The experience of exhibitors in the Chicago and New York World's Fairs has proved that modern architecture and design are potent sales tools, said Nathaniel Owings of Chicago, member of a firm which did a good share of the architectural work for the New York Fair. "In designing an all-steel service station, for example, the modern architect does not imitate wood, brick or concrete," he said. "He strikes out in a new direction to make full use of steel's unique properties. He is not influenced by the fact that most buildings are square or rectangular in plan. In a service station there are certain space requirements which must be met; the depth of the lubritorium and wash racks must be about 26 by 30 ft. and the ceiling must be sufficient to permit raising cars on a lift. Neither of these requirements apply to the office or sales room. Here a high ceiling results in an unattractive, boxy interior, as well as inefficient heating.

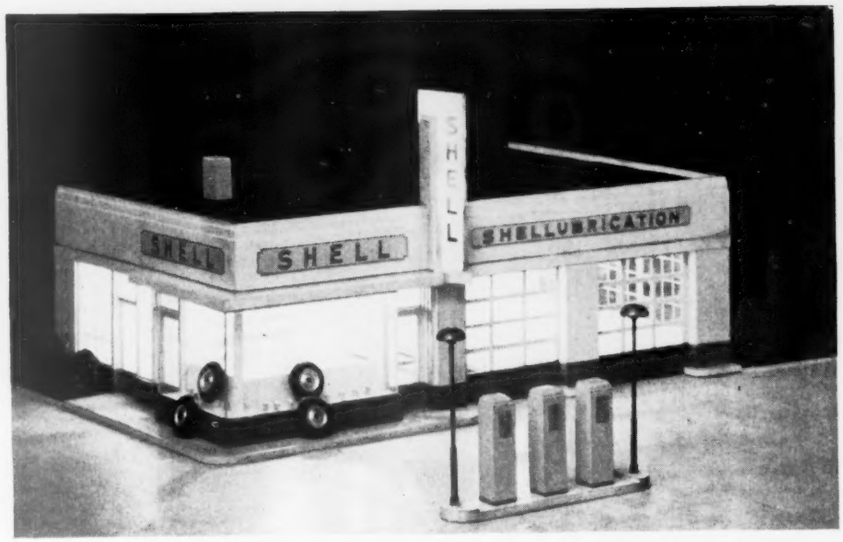
"Rather than depth, the office needs length parailel to the pumps so that it will present a maximum front to the potential customer. The lubritorium unit and the office unit can be combined into harmonious whole by the use of a canopy extending beyond the end of the building to further lengthen the whole."

This architect regards a service station as a 3-dimensional billboard advertising the company and its products. It should be designed, wherever practical, so that the departments front on the highway and the building can attract the maximum of attention from passing motorists.

MR. Owings also thinks that with many of the new highways to be built, the park or state or federal agency building the road will also control roadside buildings. In this event he believes that the oil companies will have to build stations of controlled design, to conform with the scenery or some prescribed type of architecture.

Some oil companies report they are using the new types of lacquers and synthetic enamels similar to automobile lacquers for steel exteriors of stations. "The synthetic enamel we are using at present is the closest thing on the market to a lacquer such as that used on automobiles," said R. E. Kenson of Los Angeles, service station engineer of Union Oil Co. of California. "The main difference of course between the automobile finishes and what we can do in service station construction lies in the fact that the finishes can be baked on the automobiles, while we have to do the drying and hardening by natural means. If some method can eventually be developed for a heating process of portable nature, it may have some very definite use on service stations."

Turn Office Into Sales Room In Shell's 1940 Model Station



Model of Shell Oil Co.'s standard service station, 1940 design. A canopy can be added, or a tower of glass and masonry, and the building can be erected of various materials, without destroying the effectiveness of the design

Shell Oil Co. has just announced from its headquarters in St. Louis its 1940 model service station, "Designed for Merchandising." This company states it is launching its biggest station building program since 1929.

Last year the company spent over $1,000,000 in the Mid-Continent on stations and owners of stations leased by Shell spent almost another million. All indications point to an even more extensive program in 1940, the company said.

Most of the Shell's 1939 building program was the rebuilding or extensive modernizing of old stations. Less than 8% were entirely new stations in 1939 and in 1940 less than 10% of the stations built will be entirely new, the company stated. Principal improvements in the 1940 model Shell stations are:

To make the office a sales room, doors have been moved, one complete corner of the station has been cut away except for a tubular steel support and the entire show window has been set out from the face of the building. This provides large and dominating display facilities for tires, motor oil, anti-freeze and other plus profit items.

The office, lubritorium and utility room are larger.

A vestibule has been added to the ladies' rest room but the men's room is smaller.

More shelving has been provided under the display windows and in the utility room.

With these changes, the total area of the station is slightly less than the present design and it can be built at less cost. The design can be erected in any of the commonly used building materials and is equally adaptable to different size lots.

The company stated the 1940 station was designed to help dealers capitalize on three highly important current trends in petroleum marketing:

"1—Growing dependence of dealers on the sale of other products and services than gasoline for their profits.

"2—Increasing demand from the motoring public for complete service.

"3—The rapidly accelerating trend towards concentration of gasoline gallonage in fewer but better and more completely equipped stations."

Shell says it believes in using materials for service station construction such as face brick, porcelain and ceramic tile, which require no maintenance and keep a permanently neat, fresh appearance. Since 1938, ceramic tile has been standard for the stations it has built wherever potential gallonage and other local conditions warranted its higher cost. The company's standard design, however, lends itself also to other construction materials.

"The days of Hollywood super-elegance in service stations has fortunately passed," said the company of its 1940 design. "Stations are designed today to make money, not to make a splurge."

THE SWING IS TO ALL-STEEL PORCELAIN STATIONS

. . . RECOGNITION OF THEIR SALES MAKING RECORDS

The Modern Porcelain Enamel Station, offering HIGH VISIBILITY, day and night, has stepped out in front of every other type of station in increasing sales volume.

Austin's gleaming porcelain enamel stations flag the motorist down and keep attendants up on their toes. These "high" visibility designs and the modern atmosphere they create give leading oil marketers the magnet that draws trade to their stations.

When you build this *All-Steel* Porcelain Station you go *all the way* modern . . . Porcelain Enamel on the outside, all-steel on the inside. "What a world of difference a few dollars make" when you compare a "High Visibility" Station with one that goes only halfway modern and seldom can do more than a halfway selling job.

Designs can be simple or elaborate. There are Austin standard types and custom-built types . . . both erected from panels carried in stock . . . which means fool-proof construction and speedy erection. Austin will gladly discuss details of your needs without obligation. Austin "High Visibility Designs" folder will be mailed upon request.

THE AUSTIN COMPANY

Prefabricated Porcelain Enamel Stations of *All-Steel* Construction

Service Station Division — **16112 Euclid Ave., Cleveland**

One of a group of *All-Steel* Stations just completed for National Refining Company. This station is at Clinton, Iowa. Station at top of page in Versailles, Kentucky, for another major marketer.

Austin has erected stations from the Atlantic Seaboard to the Dakotas. Station shown here, at Bismarck, North Dakota, one of several for Standard Oil Company of Indiana.

One of more than a hundred stations erected by Austin for Standard Oil of Ohio. Station may have as much or as little glass as desired with Austin *All-Steel* construction.

Major marketers everywhere are finding the *All-Steel* Porcelain Enamel Station moderate in cost and far more economical to maintain than other types—with record-making merchandising appeal.

Rebuilding Investment Is Based on Many Factors At Each Individual Location

List of Points to Be Considered in a Modernization Project was Prepared by NPN From Study of Question Blanks Used by Many Oil Companies

HERE are the points on which oil companies seek information before deciding to rebuild a modern station on a location which is now a sales outlet for their goods. The data collected also serves the company in determining the dollar investment justified by the estimated increase in gasoline gallonage, sales of oil, accessories and service.

Oil companies use various methods for determining how much investment is warranted to rebuild a station. Some use a yardstick of a certain number of cents a gallon for the annual increase in gasoline gallonage. If the amount, arrived at by multiplying this factor by the number of gallons a year to be sold after the station is rebuilt, is more than the proposed investment, the project is undertaken. If the amount is less, the modernization plan for a particular station is either revised or given up altogether.

The value of this yardstick differs for individual companies, and the number of cents a gallon ranges from 12 to 15 cents. For example, if it were estimated that a rebuilt station would do 125 gallons a day more business, the annual increase would be 45,625 gallons.

With a yardstick of 12 cts. a gal., this would allow $5475 for the modernization program, building and equipment. Whatever figure is taken, or method used, most companies figure the investment in rebuilding should be recovered in not over 10 years, some say in five years.

All companies point out that all possible data on the individual location should be studied before the decision is made as to how much can be spent in rebuilding. One important factor to study in each case is whether the station is holding its business with its present facilities, or is its business dropping? In the latter case, part of the investment may be to stop a decline in business.

Another important point say oil company engineers, is the cost to the oil company of transporting gasoline and other products to the particular location and whether that cost can be reduced in any way. Where the supplying company has a low delivery cost to the location, as for instance trucking from the refinery, it can afford to spend more in rebuilding a station than where it has a high delivery cost.

The following questions to study in considering rebuilding a station, were compiled by NATIONAL PETROLEUM NEWS, after securing from a number of oil companies the questionnaires and data blanks they use in acquiring information on the individual station it is proposed to rebuild.

These questions are not in order of importance, which order varies with individual companies. Not all the data called for in these questions is secured by each company; but the more of it the company has on hand, the better, its executives say, they can decide on whether to rebuild and how much to spend.

To Rebuild—Or Not to Rebuild

The answers to the points listed below will determine whether it will be profitable to modernize an existing station and what investment is justified.

1. District from which the station is expected to draw business.

a. Is it residential, commercial, industrial?
b. Is most of shopping done in cars?
c. Is community improving, static, or on down grade?
d. If in a small town, what is population of town?
e. Do residents do business on cash or credit basis?
f. How many families own two cars?
g. Are cars used for pleasure as well as business?
h. Are cars late models, early models?
i. What care is given to cars to indicate what facilities the modernized station might offer?

2. Location of station to be modernized.

a. Is it a corner or inside lot?
b. What are lot dimensions and grades from street level?
c. What is present value of lot and

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. . . the NEW Re-attachable Hose Coupling . . .

Think of it! A re-attachable gasoline hose coupling that won't leak, seep, or wick . . . and is guaranteed to last 5 years!

Like STREAM-FLO, its body and serrated tube are a one-piece drop forging of hard, dense metal with no porosity and able to withstand wrench and rough abuse. It's detachable and re-attachable . . . like UNIVERSAL. A bench vise and an ordinary wrench are all that's needed for attaching and re-attaching.

Like STREAM-FLO, its companion, the UNI-FLO Coupling permits fast, efficient, full-flow fueling . . . and withstands plenty of pressure under tensile, pull or hydrostatic tests!

All sizes—
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Complete Line

With the addition of UNI-FLO, the International line of gasoline hose couplings is now the most complete in the field. The one-time STREAM-FLO Coupling and the detachable UNIVERSAL are established leaders . . . and not only is the International line the largest in its field . . . it offers the widest range of sizes and combinations. *Let us send you full details!*

5-YEAR GUARANTEE . . . the longest guarantee ever given with a gasoline hose coupling comes with UNI-FLO! It is *guaranteed* to be re-attachable to hose for a period of 5 years from date of purchase. Add this to your capital investment account!

STREAM-FLO . . . The one-time coupling that has been adopted by 18 leading hose manufacturers in the United States and Canada after they had put it to the severest laboratory and field tests known!

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how has it changed in last few years?

d. Are traffic signals near enough to slow down cars?

e. Is it on highway? If so, how much transient business may be reasonably expected?

f. Can pumps be re-located so that they will be more accessible to cars?

g. Do other buildings hide the station? If so, what can be done to remedy the situation?

h. Is land available, adjacent to station, in case enlarged lot becomes desirable?

i. What type of buildings and retail stores are in the immediate vicinity?

j. Are apartment houses nearby and what garage provisions do they have for cars?

k. If at a traffic light, at which corner of the street intersection is the station located? The opposite corner on the same side of the street from where cars stopped, is considered a preferred location.

3. Volume of Business in the district.

a. What other outlets in district handle same brand gasoline and other products, and what is their present gallonage?

b. What is approximate gallonage of other leading brands in district?

c. Does present station have a number of regular customers? If not, what are chances of building a list of regular customers?

d. What would these regular customers buy, aside from gasoline?

e. Do the stations in the district sell at established prices, so that dealers have normal margins of profit?

4. Profits.

a. In considering the possible increased business resulting from modernization, what can be taken as the margin of profit? Merely increased gallonage will not pay for modernization.

b. In the district being considered, what proportion of sales are premium, regular, third-grade?

c. If most of the business is third-grade gasoline sales, can customers be educated to use regular gasoline?

d. How much more rent would be secured from lessee if station were modernized and more facilities added?

5. Traffic.

a. What is estimated number of vehicles passing an hour?

b. Do vehicles belong in neighborhood, or do they come from out-of-town?

c. Do vehicles pass directly by station?, or is there a safety zone, thus directing about half the vehicles to the side away from the station?

d. Is there a possibility of highways or main thoroughfares being rerouted? If so, will this be advantageous or detrimental to service station?

e. Does the average motorist travel more than 40 miles an hour when passing the station? In some sections of towns and cities, this is regarded as the maximum speed at which the motorist will slow down and turn in at the station.

f. How many feet on station frontage? Some companies figure that 100 feet should be a minimum, while others hold that 90 feet is sufficient.

6. Property expenses.

a. Present taxes if owned.

b. Rent if leased, and how long does lease run.

c. What would the increase in taxes be after improvements?

d. Amount of mortgage, if any?

7. Competition.

a. How many service stations in immediate vicinity, and how old are they?

b. Is it necessary to meet competitor's facilities?

c. Are other service stations owned

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Available in a complete range of types, sizes, and horsepowers to meet every automotive service need. Buy no compressor until you know all about Kellogg.

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independently or by large companies?

d. Are prices maintained?, or do dealers give a one or two-cent discount or refund to regular customers?, to all customers?

e. What gallonage is done by competitors' stations?

f. Do certain dealers hold their business by virtue of having been located there over a long period of time? Is there an opportunity of getting some of this business with a modernized station?

g. Are prices for company's products, in line with competitor's prices?

8. Zoning.

a. Are there any building or zone regulations that would affect the type of modernized station proposed?

b. Is there any possibility of city or town government passing laws restricting service stations in this area?

c. Must modernization follow any particular architectural design and how would that affect the cost?

d. Are there any restrictions on the width of driveways?

e. If in residential area, must station be closed at any particular hour?

f. If in residential area, are there any restrictions on station carrying accessories as well as full line of gasolines and oils?

g. Are there restrictions on tank trucks making deliveries any time of the day or night?

h. Are there local licenses or privilege taxes that would be imposed if the station added new lines?

9. Station personnel.

a. Does dealer look upon improvements as "a lot of nonsense," or does he see advantages in such a move?

b. Is dealer type of person who takes pride in doing a good job of housekeeping?

c. Does dealer maintain respect of his assistants?

d. Is pride taken in maintaining clean uniforms and neat personal appearance?

e. Does dealer himself have merchandizing ideas, and does he use them?

f. Is effort made to go after the "plus" sales? If not, has dealer been told of the possible extra profits for himself, as well as the company? If he has been told, is he convinced?

g. Will modernization be a definite incentive to dealer to improve his service and that of his assistants?

h. Do dealer and assistants maintain pleasant relations with customers? If not, can this situation be remedied?

i. Does dealer take active part in local business men's organizations? Does he at least belong to such organizations?

10. Lighting.

a. Are there any local ordinances on signs extending over the sidewalks?

b. How much light from surrounding buildings is thrown on service station?

c. What would be necessary to make station stand out after dark?

d. Would increased cost of light bill be justified by possible increased business?

e. If lights are to be used, what kind of lights, what color?

f. Where are lights to be placed so as to best bring out the brand name, or the dealer's name, whichever is the more important in each case?

11. Accessories.

a. What are the possibilities of selling accessories? In taking this

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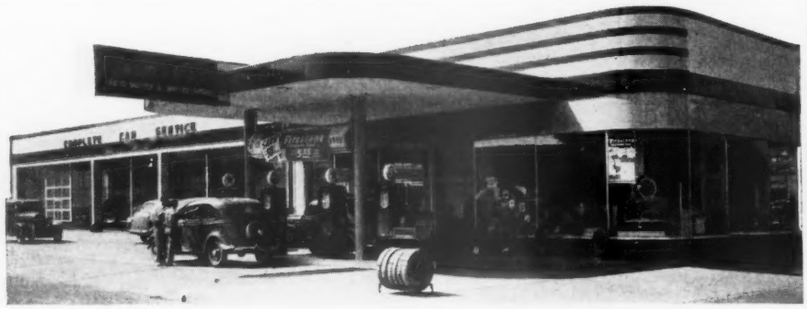
Check **THESE *Streamliner* FEATURES!**

- **TRUE MODERN ARCHITECTURE--** provides the utmost in dynamic sales appeal with maximum space efficiency.
- **PREFABRICATED STEEL CONSTRUCTION-** provides long life, economy, fire safety
- **STEFCO SECTIONAL DESIGN--** makes it easy to move, expand, or change layout
- **SEND TODAY FOR YOUR FREE COPY OF--** "The Story of the Streamliner," sixteen double size pages of service station layouts, photographs and data—just off the press!

STEFCO STEEL COMPANY - - MICHIGAN CITY, IND.



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Wide range of finishes
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question into consideration, the factors already mentioned about the district should be studied. Old model cars will have different needs than late models.

12. Parking.

a. Is there a need in the vicinity for parking facilities?

b. If the district is shopping, what are the present provisions for shoppers to park their cars?

c. Are there pay-parking lots in the vicinity?

d. Is there land on the station site available for parking purposes?

e. Would it be profitable to surface land to make it suitable for parking?

d. What can be charged for parking, or should parking be merely a convenience for patrons and no charge made?

13. Dealer's opinion.

a. What is dealer's opinion as to what district needs in a rebuilt station?

b. What are dealer's ideas on what merchandise and services can be sold after modernizing?

14. Sales promotion.

a. What means will be taken to publicize modernized station? Some companies advertise in local newspapers, put on radio skits, have banners in front of station, make neighborhood solicitations and distribute handbills in the neighborhood.

15. Training.

a. What can be done to help the dealer and his assistants present a better sales talk to the customers, after modernization? Companies hold training schools, have training done at the station by experienced supervisors, put out new sales promotion manuals, offer prizes for sales increases, etc.

Here's an Easy Way to Save Time and Money!

Speed up your truck tank deliveries! Eliminate slow and dangerous "bucketing" of gasoline, kerosene and fuel oil. Give your driver more time for selling! PUMP-N-METER *will help you do it.*

***Your customers* will like PUMP-N-METER, too — because they have confidence in meter recording.**

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is fast . . . accurate . . . safe. Self-contained and easily attached to any truck tank. Nozzle control. Thoroughly reliable. Powered by its own gasoline motor. Priced so low that it quickly pays for itself in time saved and increased number of sales. Get the facts! Ask your equipment jobber or write direct.

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The World's Oil

The paper entitled, "The World's Oil", by Dr. John W. Frey, associate director of Interior Department's Petroleum Conservation Division, has been published in *The Quartermaster Review*, January-February, 1940. Dr. Frey for years was with the Bureau of Foreign and Domestic Commerce, then went with the Petroleum Administrative Board during NRA and was appointed to the PCD when the PAB was folded up in 1936.

Rebuilding Stations Efficient Way To Increase Sales

The entire rebuilding of service stations into modern, efficient outlets has proved a profitable means to increase business for the Savory Oil Co., independent oil marketer of Binghamton, N. Y.

"This program has built sales for us at less expense than opening entirely new outlets and it has helped cement

our relations with our dealers so it would be hard for competitors to get them away from us," G. L. Savory, head of the company, told NATIONAL PETROLEUM NEWS.

This company has rebuilt seven dealer stations within the past two years. Besides increasing its gasoline business, it expanded its accessory sales.

Air-Cooled Rest Rooms Cost Less Than $100

Air-cooled rest rooms are provided by the Associated Division of Tide Water Oil Co., for the comfort of its motoring customers on the Pacific Coast.

The first experimental unit was installed at the company's station No. 521, operated by Ted McVey, at Merced, Calif., in the San Joaquin Valley, where motorists frequently encounter temperatures above 100 during summer months. Merced is a key point for travel to and from the Yosemite Valley.

Cooling of rest rooms is accomplished by an evaporator unit approximately 31 inches long, 18 inches deep and 24 inches high. It consists essentially of a pressed steel housing with a louvered back which contains an excelsior mat kept wet by a small circulating water pump. Air is drawn through this mat by multivane fans. The experimental installation has two 6-inch fans, with two openings on the discharge side so designed that they are spaced on each side of the partition between the rest rooms.

The unit is located in the lubritorium adjoining the comfort stations, above the overhead tire rack. Total cost of the installation was less than $100.

Operator McVey says motorists greet this provision for their convenience with unusually favorable reaction. Women motorists, particularly those with children, have been quick to voice their appreciation of the added comfort.

Efficiency of the installation was revealed by a check which showed temperature in the rest rooms was at times 16 degrees lower than on the outside. A reading taken in the late afternoon disclosed 102 degrees shade temperature outside the buildings where there was circulation of air, and 92 degrees in both the rest rooms.

As an added convenience to motorists, an electrical refrigerator provides ice water at this station.

Robert Yarnall Richie

YOUR FERTILE FIELD

Every General A nerican terminal is a profitable field for you. Here your commodity is stored in a modern protective tank—reserved specially for your type of product. You profit from SAFETY! Here General American facilities speed your commodity from ship to tank or tank car—or vice versa. You profit again from this extra SPEED. And you gain this profit without a penny's investment on your part. Join the world leaders who profit from General American Terminal Service.

Strategically located to serve you!

GATX GENERAL AMERICAN

GENERAL AMERICAN TANK STORAGE TERMINALS

Goodhope, La. and Westwego, La., (Port of New Orleans)
Corpus Christi, Texas
Carteret, N. J. (Port of New York) Galena Park, Texas (Port of Houston)

A DIVISION OF GENERAL AMERICAN TRANSPORTATION CORPORATION

2000-Gal. Tanks Installed When Stations Are Rebuilt

A rebuilt station of Bareco Oil Co. at Oklahoma City

The service station modernization program of Bareco Oil Co. of Tulsa, formerly Barnsdall Refining Co., is a part of its plan for the general revamping of its marketing properties, to put them on a more flexible and efficient operating basis.

One part of the program calls for concentrating the distribution of its products closer to its refineries, which are located at Wichita, Kans., Barnsdall, Okla., and Corpus Christi, Texas, so its transportation costs will be lower, whether railroads or trucks are used. In this territory, the company is re-building its stations on owned sites, where it is determined that increased sales would justify the investment.

The facts on which the decision is made by company executives whether to rebuild, and how much to spend on the individual location, are largely based on a study of the company's retail distribution made by field inspectors. The inspectors submitted reports which go into detail on stations located on company-owned property particularly. Following are the principal features by which stations are modernized:

Tanks of 2000-gals. capacity are installed.

Rest rooms rebuilt and new conveniences added, among them mirrors.

Offices remodeled to provide more display room.

Awnings, in attractive shades, in front of the rest rooms, provide the necessary shade for southern locations, without the expense of canopies.

New lighting fixtures and equipment, including pumps, compressors, lifts in most cases, and lubrication equipment are installed, regardless of the extent of building modernization.

Increases in business have followed the rebuilding of stations. George Racette of Tulsa, vice president of Bareco, said that gallonage at a rebuilt Oklahoma City station jumped from 200 to 600 gallons a day and has held consistently at that level.

Construction data on another rebuilt station at Oklahoma City, shown in the photograph is as follows:

Dimensions: Building, 53 by 25 by 15½ ft. Display windows, two in number 8 by 6½ ft.

Material exterior: Walls, concrete masonry units; roof, steel frame and deck construction, carrying an insulated, built-up asphalt covering.

Material, interior: Sales room, plaster over concrete. Grease room and wash room, concrete blocks, painted, with concrete floor. Rest rooms, tile floor, base and wainscoat, rest of walls and ceiling, plaster.

Decorations: Exterior, white with trim and lettering in red and blue. Sales room, 42 in. wainscoat red, with 1½ in. blue border. Rest of walls and ceiling eggshell cream.

ATTRACT NEW CUSTOMERS with a CURTIS Four Post Lift

Curtis' Portable Electric Lift assures more business and greater profits

You can add strong sales appeal to your garage or service station with a modern Curtis Four Post Lift. Not only will you attract more lubrication jobs, but you will sell many more under-car repairs because of the unobstructed visibility when on the lift. And unusual accessibility makes it possible to do the work more quickly and easily—therefore at a greater profit!

It will pay you to buy the Curtis Lift—the only one which gives you *all* these features:

No Overhead Obstructions—Drive on either end—no interference with open car doors.

Safe—Each corner has safety dogs and safety switch. All four corners of platform stop should emergency occur at any corner.

No Excavation—No special foundation, no floor sockets.

Maximum Accessibility—Clear working space under car.

Easy to Install Anywhere—Move it when and where you like. Rigid. Self-supporting. No tie rods.

Exceptionally rugged construction—Extremely simple mechanism. Free-wheel and Roll-on types.

CURTIS ST. LOUIS • NEW YORK • CHICAGO • SAN FRANCISCO PORTLAND • LOS ANGELES

Send Coupon for Information and Prices

CURTIS PNEUMATIC MACHINERY CO., 1965 Kienlen Avenue, St. Louis, Missouri

Gentlemen: Please send me complete data including prices on the NEW CURTIS FOUR POST PORTABLE ELECTRIC LIFT.

Name_____

Firm_____ Street_____

City_____ State_____

Report Gains After Stations Are Rebuilt

THAT rebuilding and modernizing stations materially increases their sales, is the experience of the National Refining Co. of Cleveland. This company, under new management since early last summer, made rebuilding stations part of an aggressive sales promotion program.

The company entirely remodeled selected key stations, rehabilitated others and closed some it considered not capable of being profitably operated. In Columbus, O., for example, it rebuilt 10 of its own stations, modernized 14 dealer outlets and reopened them all for business on the same day. Gala openings were held at all stations, and public attention was secured through radio, newspaper, and billboard advertising.

Gasoline gallonage in Cleveland stations increased by 52 per cent, and in Columbus stations from 91 to 124 per cent for three months after reopening, as compared with the period before rebuilding. Gallonage on the open days sky-rocketed from 7 to 17 times the number of gallons being pumped prior to being modernized.

Even larger relative increases are shown in tire and battery and accessory sales through National's modernized stations. This is explained by the fact that the company took on the merchandising of these automotive goods as part of its new sales policy. Before this, National was not active in the automotive supplies field.

Tire sales in the Cleveland stations, three months after modernization, increased by almost 150 per cent; and in these same stations, battery sales jumped 700 per cent.

At the Columbus stations, tire sales increased by 48 per cent in some stations, and by over 100 per cent in other stations. Accessories were not sold in many National Refining stations before their modernization. Now they are a growing part of this company's business.

Company dealers were put through National's "Alert Service" training school, so that good housekeeping, planned merchandising technique and latest operating practices were in line with the modernized stations.

A new battery sales program was recently inaugurated, and more attention was paid to tire and accessory sales, as well as to opportunities for lubrication jobs.

Engineers to Hear Efficiency and Safety Needs of Future Highways

"Rebuilding Our Cities for Traffic Safety and Efficiency," is the title of a symposium to be presented by a group of top-ranking industrialists at a special dinner meeting of the Metropolitan Section, Society of Automotive Engineers, in New York, Mar. 21.

Alexander Fraser, president of Shell Oil Co., Inc., St. Louis, will be one of the speakers, each of whom is an outstanding authority in his field. Others include: Paul G. Hoffman, president of the Automotive Safety Foundation and of the Studebaker Corp.; Dr. Miller McClintock, director of the Yale Bureau for Street and Traffic Research; and Frank T. Sheets, president of the Portland Cement Assn.

Designed to bring together the safety and efficiency viewpoints of the petroleum and automotive industry, with the viewpoints of engineers on highway materials, construction and planning, this open meeting will seek to crystallize recent endeavors toward solution of highway problems.

T. C. Smith, American Telephone and Telegraph engineer, and chairman of the Highways Research Committee of the SAE, is in charge of the meeting.

ANY DESIGN POSSIBLE CAN BE YOURS!

● *One of more than 40 distinctive Frameless Insulated Steel buildings erected last year for Gulf Oil Corporation.*

IDENTIFY YOUR COMPANY, and increase gallonage—with a *distinctive* station!

Any design possible can be yours, with frameless insulated steel and porcelain enamel.

And frameless insulated steel construction makes possible a minimum use of porcelain enamel, with decided savings. It gives attractive and distinctive appearance, together with low maintenance.

Send us a sketch of the size and type of station you contemplate building, and we will quote prices—without obligation on your part—promptly.

● *Note the distinctive offset parapet and block design carried out in Frameless Insulated Steel and Porcelain Enamel.*

THE CINCINNATI MANUFACTURING CO.

1000 Evans Street
Cincinnati, Ohio

●

Sole Fabricators of "Frameless Insulated Steel Construction"

Oil Company Warns Car Owners Of Change-Over Need This Spring

Particular need for Spring Change-Over servicing of all automobiles this year, following an unusually severe winter, is the spark plug in a sales message prepared by engineers of the Colonial Esso Marketers.

In a warning to car owners, it was pointed out that neglect of such services this spring might prove costly and would deprive the motorists of the protection their cars require for the higher speeds and long runs of summer driving.

Using recent sub-zero weather as a background for this warning, these authorities emphasized that, as a result of temperatures which in many parts of the country were the lowest in 40 or 50 years, the average car has been subjected to unusually hard service the past several months. This has meant, or should mean to the car owner, this warning says, that:

1. Extreme low temperatures accelerated motor oil contamination.

2. Frozen roads, snow and ice threw wheels out of alignment.

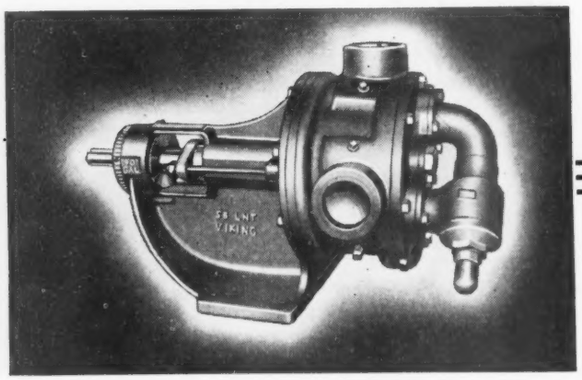
3. The cold weather imposed strains on batteries.

4. Many radiators did their work under difficulties.

Pointing to the estimate that nearly 200 million dollars will be spent for Spring Change Over-Services within the next few months, the company stressed that crankcases should be drained and flushed, batteries checked, radiators drained and flushed, chassis lubricated, transmissions and differentials should have their old lubricants removed and new lubricants substituted, spark plugs should be cleaned, front wheel bearings repacked, air filters cleaned.

Also included in the spring needs of many cars is the realignment of front wheels. The Esso warning recommends that all cars have the wheel alignment checked and suggests that tires be checked carefully after a winter of use.

"Change-Over service is advisable each spring and fall regardless of winter or summer weather extremities; but this spring the need is greater than in many years," car owners were told. "Motorists will find this an ultimate economy and an insurance against costly repairs, inefficient operation of cars and possible breakdowns."



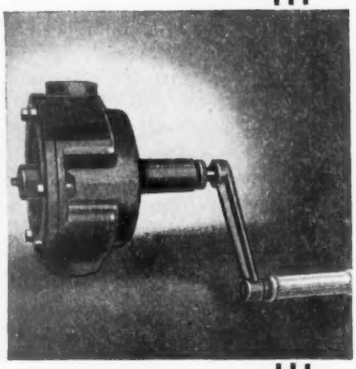
←—Figure 124

HERE'S SOME "Inside" INFORMATION ON VIKING BUTANE-PROPANE PUMPS

Just take a look and see what the Viking Butane and Propane Pump offers you on the inside.

First of all, it has an extra long stuffing box filled with 10 rings of special packing, divided in the middle with a lantern ring . . . treated gaskets on both head and back flange . . . available in all iron or bronze fitted construction . . .offered in 35, 50 and 90 gallon per minute sizes . . . designed with special base that holds it firmly to chassis, eliminates distortion and end thrust and makes installation easier.

Inside and out, it's the perfect pump for handling Butane and Propane. Bulletin 2301-40 presents photographs and complete specifications of Truck Mounting, Bulk Station and Hand Driven Pumps for hazardous liquid service. Write for a copy.



↑ Figure 57A1

VIKING PUMP COMPANY
CEDAR FALLS, IOWA

STORES ON WHEELS

Pointing to the consumption of more gasoline and petroleum products, two new California companies have grown to considerable size through servicing customers directly.

One of the companies is an accounting firm, which has trucks fully equipped with all necessary facilities, including typewriters, adding machines, bookkeeping machines, all approved forms, plus certified public accountants. Its customers are some 800 companies most of which cannot afford to maintain large business offices.

After the client's books are taken care of, his taxes, depreciation and the like figured out, the "office" rolls on to another client.

A house-maintenance firm is the other company on wheels. This organization stocks its trucks with about 1500 items, the lack of which makes housekeeping difficult. Day or night these trucks are on call with a wide assortment of merchandise, including light bulbs, electric outlets and switches, window locks, door bells, wallpaper patches, and gas burners. Parts not carried in the truck are delivered on call.

District Canvassing Made Opening a Success

Neighborhood canvassing, prior to the opening of this new station of the Paramount-Pingree Oil Co., in Salt Lake City, paid good returns, even though the station was opened on a holiday, New Years Day. Opening day's business was reported by A. H. Ehler, president, as 992 gals. of gasoline, 18 gals. of motor oil, 7 gals. of anti-freeze, 7 grease jobs and 5 wash jobs.

Two weeks prior to the opening, "Vic." Allred and Glen Winegar, operators of the station, canvassed the district and lined up 40 to 50 prospective customers turned into the office for credit approval, said Mr. Ehler. They had advance orders for 800 gals. of gasoline, together with wash and grease jobs. They also ran an ad in the local newspaper announcing the opening.

gallon drum they were carrying for the motor boat with gas, to look at the motor oil, fill the radiator and check the tires, while they went inside to fill up with beer and sandwiches.

"When it came time to pay for the purchases, an itemized bill was presented: so much oil at 40 cents a quart, so much gas at so much per gallon, and filling radiator at 10 cents, and checking tires at 25 cents.

"I asked them," Mr. Daly adds, "if they would stop at this particular station again and they said certainly, that a fellow has to pay for his water, and if we are too lazy to check our own tires, we should be glad to pay."

Canadian Station Charges for Air and Water Service

Are oil marketers overlooking a bet by not making a charge at their stations for the many courtesy services now generally given motorists in a bid for their repeat business?

This possibility is indicated in a letter received by an oil marketer from two friends who paid—without protest, it is said—10 cents for water added to the radiator and 25 cents for air put in the tires, by a Canadian service station.

The marketer, Bill Daly, who operates Daly's service stations at West Springfield, Mass., writes NATIONAL PETROLEUM NEWS the following account of an experience of two friends who operate a large service equipment station at Springfield:

"They (his friends) had gone on a fishing trip and stopped at this service station in Canada, where they told the man wiping the windshield to fill the tank with gas, also to fill a 15-

ONE *Revolutionary* DEVELOPMENT GIVES YOU ALL THESE ADVANTAGES

50% to 75% Saving
IN EVAPORATION AND STORAGE LOSSES

NO MECHANICAL PARTS
No Upkeep—No Labor Cost for Inspection—No Binding, Sticking or Freezing at Critical Moments

POSITIVE PROTECTION
Against Tanks Bursting or Buckling
Positive Operation—No Dependence on Human Element—No Parts to Bind or Stick.

MINIMIZES FIRE HAZARD

KEEPS DUST AND MOISTURE OUT OF TANK

PROTECTS QUALITY BY RETAINING LIGHT ENDS

★ The advantages outlined above are revolutionary, but there is no guesswork about them . . . all have been proved by the everyday experience of users—experience which demonstrates conclusively that ECONO-VENT provides *greater* protection than has ever been possible before, plus complete freedom from mechanical attention, plus *50% to 75% savings in evaporation and storage losses* . . . To delay investigation of ECONO-VENT is to postpone its advantages.

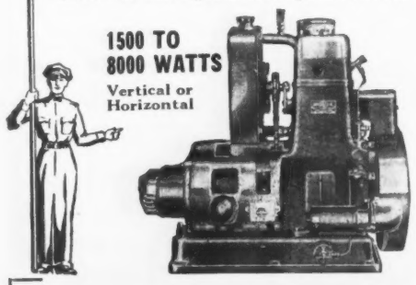
Write for complete data today.

ECONO-VENT CORPORATION
1005 Belmont Avenue **Chicago, Illinois**

SAVE WITH Econo-vent LIQUID SEAL TANK VENT
The New Type Tank Vent with the Revolutionary LIQUID SEAL

Amazingly LOW COST LIGHT and POWER for Service Stations

Get a WITTE Dieselectric Plant and be independent of high lines—eliminate standby charges. Make your own electricity for less than 1c a K.W.H. Pay for your WITTE out of savings—and thereafter net more profit from your station.



WITTE DIESELECTRIC PLANTS

EASY TO BUY—$825 and up—f.o.b., K.C., Mo. Available under Gov't. F.H.A. with nothing down, 36 months to pay. Write now for free literature and complete details of "Pay from Savings Plan".

WITTE ENGINE WORKS
3703 OAKLAND AVE. KANSAS CITY, MO.

New Equipment

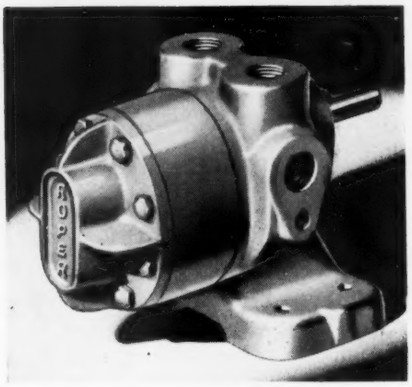
AND THE MANUFACTURERS

BULLETIN ON HOSE—To help in selecting the correct hose for specific uses and in getting more service from hose, the Mechanical Goods Division of the United States Rubber Co., New York, has published a 34-page booklet, entitled "U. S. Hose Hints."

* * *

LARGER FACTORY PURCHASED—Headquarters of Chiksan Tool Co., formerly located at Fullerton, Cal., are now established on the company's new property at Brea, Cal. The property, recently purchased from Shell Oil Co., in addition to the modern office building, includes housing facilities for Chiksan's factory, testing department and stock warehouse.

The company's sales in 1939 were the largest in its history, reports Earle R. Atkins, sales manager. The Chiksan line is distributed nationally by the Crane Co., but the company has its own representatives in principal cities.



"HYDRAULIC BALANCE" is an outstanding feature of a new line of rotary pumps just announced by the Geo. D. Roper Corp., Rockford, Ill. This design equalizes internal pressure at all points and absorbs all shock or thrust from power end of drive shaft, the company says.

Other features of the new line, which contains over 7000 different units, include choice of spiral, spur or herringbone gears; conventional packing box, spring loaded packing box or mechanical seal; sleeve or roller bearings; built-in or external relief valve; eight different piping arrangements.

* * *

NEW CATALOG—Opaco Division of American Machine and Metals, Inc., East Moline, Ill., has issued a new catalog describing its line of lubesters, barrel pumps and kerosine dispensing units.

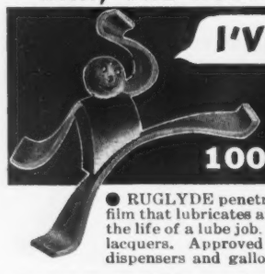
* * *

N. Y. REPRESENTATIVE—Wackman Welded Ware Co., St. Louis, announces the association at its New York district sales office, of A. F. Colling as executive vice president.

* * *

PENNSYLVANIA MOTOR OILS
IN CANS — DRUMS — TANK CARS
Write for PRICES
Buyers cans received—stored—filled and shipped as wanted.
INDUSTRIAL OIL CORPORATION
WARREN, PENNA.
ESTABLISHED 1924

DAN, THE RUBBER MAN, SAYS:



I'VE GOT WHAT IT TAKES TO STOP RUBBER SQUEAKS
100% SAFE!

● RUGLYDE penetrates the tightest fittings . . . furnishes a tough, viscous film that lubricates and preserves. Contains 'dag Colloidal Graphite Lasts the life of a lube job. Non-flammable, non-poisonous. Won't harm the finest lacquers. Approved by leading oil companies Sold in 8-ounce refillable dispensers and gallons.

For rubber door seals, hood lacings, and other parts requiring surface lubrication — use DOOR-EASE Stainless Stick Lubricant. Won't soil clothing or upholstery. Won't harm rubber or car finish.

AMERICAN GREASE STICK CO.
MUSKEGON, MICH.

DIVISION MANAGER — D. H. McAdams, has joined the sales organization of the Joyce-Cridland Co. of Dayton, O., as midwest division manager. For the past seven years he had served in this same capacity for the Automotive Compressor Division for Ingersoll-Rand Co. He will continue his headquarters in Chicago and is at 1213 W. Washington Blvd.

D. H. McAdams

NEW OIL STOVE—Included in the new line of oil stoves of the Perfection Stove Co. of Cleveland are several models in which no handling of the oil is required, a constant level valve being used, for connection to a large outdoor fuel storage tank, providing a continuous supply for the stove.

* * *

SALES STAFF APPOINTMENTS—Guy Gundaker, Jr., has been appointed special representative to the assistant general sales manager of the tire division of B. F. Goodrich Co., it is announced by C. B. O'Connor, general sales manager of the tire division.

J. T. Staker has been appointed manager of the fleet sales division of the truck and bus tire department, W. C. Bray, department manager, announced.

* * *

HIGHWAY LAW SLIDERULE—A new and improved highway law sliderule recently brought out by the Fruehauf Trailer Co., gives the legal truck and trailer size limits for every state in the country. This is the third edition of a device that provides a wide variety of truck and trailer information, including such items as permissible width and height, trailer regulations, length regulations, gross weight and various notations where special rules or regulations are in effect.

* * *

LIQUEFIED GAS PUMP—A new pump, especially designed to meet requirements imposed by the Butane-Propane Industry, is being offered by the Smith Precision Products Co., South Pasadena, Cal.

High volumetric efficiency, elimination of destructive bearing loads, and the provision of a packing box permanently sealed against the escape of volatile gases under extreme pressures are features claimed for this new pump. Of the multiple gear type, in which each gear is provided with double inlet and outlet ports, this equipment uses an integral reduction gear case filled with a heavy lubricating fluid, which is insoluble in butane, according to the manufacturer.

* * *

NEW PLANT ADDED—Jesco Lubricants Co. of Kansas City has added to their original building a new plant of two floors and part basement, giving an additional 24,000 square feet of floor space. In the addition, to be used principally for warehouse space, it also included a modern laboratory and a new office arrangement.

* * *

NEW SALES OFFICE—Cooper-Bessemer Corp. of Mt. Vernon, O., has established a sales office in St. Louis, Arcade Bldg., covering most of Missouri, southern Illinois, northeastern Arkansas and Mississippi as far south as Greenville. W. S. Arthur, who recently joined the company, will manage the new branch.

The "OVERHEAD DOOR"
"Trade Mark"
THE DOOR WITH THE
MIRACLE WEDGE
wedges tightly—YET—opens easily

IMPORTANT:
The fast, smooth operation of this *weathertight* door will help solve your heating problems. Write for free descriptive literature *today*.

Backed by
A NATION-WIDE SALES INSTALLATION SERVICE
OVERHEAD DOOR CORPORATION, Hartford City, Indiana, U. S. A.

THE SAME COMPOUND YOU USE TO KEEP YOUR TOILETS SPARKLING-CLEAN

A little Sani-Flush keeps comfort-station toilets glistening like new. Sprinkle it in the bowl. *Follow directions on can.* Flush the toilet and the job is done. No work!

Here's a tip: Keep extra Sani-Flush in the station. Suggest cleaning out automobile radiators with it. Sani-Flush is advertised for that purpose in magazines having a total circulation of more than 13 million. It is the *only* preparation that is being advertised consistently for removing rust, sludge, sediment and scale from the cooling system. Sani-Flush costs 10c to clean out a car radiator (25c for the largest truck or tractor). This is a very small part of the price you can charge.

Buy Sani-Flush in grocery and hardware stores. 10c and 25c sizes. Also economical 25-lb. pails. Write for information. . . . The Hygienic Products Company, Canton, Ohio.

Markets

Mid-Continent

TULSA, March 4.—Reduced quotations for Mid-Continent lubes reported last week by some refiners lopped as much as 2.25c off the low quotations for representative grades. New prices, however, effected reductions of about 1c on most grades. "Competition from Pennsylvania and Chicago sellers contributed to the cuts," one refiner said.

Moderating weather throughout much of the Middle West was said to have stimulated demand for gasoline, kerosine and tractor fuels. "Warm weather has sent many cars back onto the highways and farmers are stirring again," refiners said.

Refiners said reports from jobbers in the Middle West indicated that Illinois gasoline no longer was the "competitive factor" it had been recently. There was a perceptible decrease in "below-the-market" gasoline offerings from both Illinois and the Mid-Continent, according to reports. No changes in gasoline quotations were reported.

Gulf

NEW YORK, March 2.—Reports from Gulf refiners the past week indicated kerosine available for open spot sales was scarce. One refiner said he doubted if there were more than 5000 to 10,000-bbl. lots available for open spot sale at any one plant and that a buyer would have to do "some shopping around to make up even half a cargo."

Quotations reported for GCRA specification kerosine ranged from 4.625 to 4.75c, up 0.125c on the low, and for 41-43 w.w. kerosine from 4.50 to 4.625c, up 0.25c on the low. Unconfirmed report of a kerosine sale at 4.625c at the Gulf was heard. Details were not available. No changes were reported in quotations for other products at the Gulf.

Atlantic Coast

NEW YORK, March 2.—Kerosine was reported scarce and in good demand by Atlantic Coast suppliers the week ended March 2. Quotations reported at Philadelphia ranged from 6 to 6.25c, up 0.5c on the low. A Philadelphia supplier reported paying 6c for a 5000-bbl. barge lot. Prices were reported unchanged at other seaboard points.

Reports were current in the trade that 72-74 octane gasoline was available in tank cars at 6.375c, and in barges at 6.125c, at New York harbor but a careful check of suppliers failed to reveal any quotations below 6.50c and 6.40c, respectively.

Quotations reported for 65-66 octane gasoline at Philadelphia and Baltimore were down 0.25c on the low to 6.50c when a supplier who had been quoting 6.75c for 72-74 octane reduced his quotation to 6.50c and said he would sell 65-66 octane at New York, Philadelphia, and Baltimore at the same price. A Philadelphia barge terminal operator also reported quoting 6.50c for 65-66, 68-70, and 72-74 octane gasolines "in tank cars and under the fill."

Mid-Western

CHICAGO, March 2.—Prices of all refined products were reported unchanged by most refiners and tank car marketers in Chicago the past week.

Demand for gasoline was "fair," according to reports. Refiners' gasoline quotations ranged from 3.75 to 4.125c for 62 octane and below, 4c for 63-66, 4.25 to 4.75c for 67-69, and 4.50 to 5c for 70-72 octane, F.O.B. Group 3. Marketers' quotations ranged from 3.375 to 3.75c, 3.625 to 4c, 3.50 to 4.25c, and 4 to 4.50c, for the four grades, respectively. A marketer who sells mostly southern Illinois gasoline reported demand had improved and that 62 octane and below was selling at 4.25c, F.O.B. Southern Illinois.

No open spot gasoline sales were reported by refiners. Sales reported by marketers totaled 8 cars—1 car of 62 octane and below at 3.125c, 1 car of the same grade at 3.375c, and 6 cars of 70-72 octane leaded at 4.125c, F.O.B. Group 3.

The call for kerosine and fuel oils was good, sellers said. No changes were reported in quotations.

N. P. N. Refinery Index

The Refinery Index shown below represents the return in cents per barrel (42 gallons) from refining a barrel of 36 gravity Mid-Continent crude into its various principal products. The index is calculated by subtracting the current price of crude at the well from the average price of refined products sold at current quoted Oklahoma refinery market prices.

Date	Margin
March 1	40.9
Month ago	46.3
Year ago	39.4

Pennsylvania

CLEVELAND, March 2—Price declines of 0.5 to 2c a gal. in quotations for dark cylinder stocks, and 0.5c a gal. in high octane gasoline prices in the upper districts, were highlights of the western Pennsylvania refinery market the last week of February.

Some refiners said there were indications of an early revival of export lube oil buying. Domestic buying has been at a standstill since late last year, when buyers stocked up heavily under their 1939 top-price contracts, it was said.

No changes were reported in neutrals or bright stock quotations the past week. Steam refined stocks were offered lower with 600 s.r. off 0.5c at 14c, 650 and 600 flash off 1c at 16c and 17c, respectively, and 630 flash down 2c at 20c.

Upper field quotations reported for 75-76 octane gasoline ranged from 6 to 6.80c, off 0.5c, with "Q" and other high octane grades down 0.5c at 5.75c low.

California

LOS ANGELES, Mar. 2.—Shortage of tankers and high charter rates for those that were available were said to have affected adversely both export trading and domestic prices of petroleum products on the West Coast the past week. Inability of some California off-shore shippers to move normal quantities of gasoline to Washington and Oregon ports was reported to have been one of the reasons for increased inventories and new lows in gasoline prices.

Deliveries of third grade gasoline to points in Los Angeles and Orange counties were said to have been made by one Los Angeles Basin refiner at 6.5c a gal.

Reports here indicated that California out-of-state truck-and-trailer shipments of independent third grade gasoline, especially to Arizona points, had decreased as a result of competition from El Paso and New Mexico refineries. To remain on a competitive basis, a rack price of less than 6c a gal. at Basin plants was believed to be necessary, and refiners were said to be unwilling to meet this price.

A reduction of 0.25c a gal. in quotations on natural gasoline at independent refineries in the Basin area was reported but could not be confirmed.

Gas oil and stove distillate sold at a new low of $0.95 per bbl., a decline of 5c per bbl., according to reports.

REFINERY and SEABOARD PRICES

In bulk lots by Motor Transport, Tank Car, Barge or Tanker as shown

HOW PRICES ARE REPORTED—

Refinery and Seaboard prices in National Petroleum News are gathered by PLATT'S OILGRAM and are as published in the Monday issue of the OILGRAM.

PLATT'S OILGRAM is a reporting service issued in three identical editions daily from News Bureaus at New York, Cleveland, and Tulsa, Okla. PLATT'S OILGRAM gathers and publishes what its publisher and representatives believe to be accurate news of sales, prices and current happenings affecting the oil industry and that will be of interest to its subscribers. As this information is usually private, OILGRAM reports it according to what it is able to obtain from sources deemed reliable.

All information is supplied without guarantee as to its completeness, accuracy, time of transmission or promptness of delivery.

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Publisher reserves the right to change the extent, nature and form of showing this information at any time.

Prices shown in the tables are quotations (meaning sellers' general offers or posted prices), or actual sales prices, reported to OILGRAM by refiners for "open spot" transactions, except as otherwise specified.

Prices arrived at by discounts off a specified price or "market date of shipment," prices named in contracts or prices arrived at in accordance with any arrangement made prior to date of sale, are not for "open spot" transactions and therefore are not considered in making the price tables. Prices made to brokers and prices in "inter-refinery" transactions are also not considered except as may be noted.

All prices are for "immediate" shipment except in Gulf Coast bulk transactions where shipment is generally to be made in ninety days. Prices are FOB refineries, pipelines, or tanker terminals in districts designated.

Prices shown are for quantities in bulk such as tank car lots, motor transport lots or barge lots; and in cents per gallon; heavy fuel oils are in dollars per barrel of 42 U.S. gallons; wax and petrolatums are in cents per pound. Prices applying to barges or cargoes only are so designated.

Prices do not include taxes or inspection fees. Prices are published at the close of the business day.

Mid-Western prices in the tables were gathered from refiners with offices located in Chicago and the surrounding territory. While the prices are quoted on a Group 3 (Oklahoma) freight basis, this is in accordance with the custom of the oil industry which uses Group 3 as a price basis for the ease of comparing prices even when the material originates in another refining district. Other refinery prices are given by and for the particular refining district where the material is made and from which it is shipped.

When prices obtained by OILGRAM do not conform to these conditions the exception and the new conditions are noted in the news lead or in conjunction with the price table by footnote or otherwise, for the particular refinery or sales district involved.

Crude oil and products covered by OILGRAM'S news and price service, except where noted, have been represented to the publisher as fully up to the customary trade specifications indicated and according to the generally accepted methods of test; and all crude oil and all products thereof as having been lawfully produced and transported.

Any apparent error should be reported to the nearest OILGRAM or National Petroleum News office at once as no correction will be made after the second issue of the OILGRAM or National Petroleum News following its publication.

Summary of Daily Gasoline Prices (Feb. 26 to March 4)

	March 4	Feb. 26	Feb. 27	Feb. 28	Feb. 29	March 1
U. S. Motor, (Oct. L-3)						
62 octane and below:						
Oklahoma	3.75 – 4.125	3.75 – 4.125	3.75 – 4.125	3.75 – 4.125	3.75 – 4.125	3.75 – 4.125
(a) North Texas	3.875– 4.25	3.875– 4.25	3.875– 4.25	3.875– 4.25	3.875– 4.25	3.875– 4.25
West Texas	4.00 – 4.25	4.00 – 4.25	4.00 – 4.25	4.00 – 4.25	4.00 – 4.25	4.00 – 4.25
Mid-Western (Group 3 basis)	3.75 – 4.125	3.75 – 4.125	3.75 – 4.125	3.75 – 4.125	3.75 – 4.125	3.75 – 4.125
63-66 octane:						
Oklahoma	4.00 – 4.375	4.00 – 4.375	4.00 – 4.4375	4.00 – 4.4375	4.00 – 4.4375	4.00 – 4.375
(a) North Texas	4.125– 4.25	4.125– 4.25	4.125– 4.25	4.125– 4.25	4.125– 4.25	4.125– 4.25
West Texas	4.50 – 4.625	4.50 – 4.625	4.50 – 4.625	4.50 – 4.625	4.50 – 4.625	4.50 – 4.625
Mid-Western (Group 3 basis)	4.00	4.00	4.00	4.00	4.00	4.00
67-69 octane:						
Oklahoma	4.00 – 4.75	4.00 – 4.75	4.00 – 4.75	4.00 – 4.75	4.00 – 4.75	4.00 – 4.75
(a) North Texas	4.375– 4.50	4.375– 4.50	4.375– 4.50	4.375– 4.50	4.375– 4.50	4.375– 4.50
West Texas	4.50 – 4.75	4.50 – 4.75	4.50 – 4.75	4.50 – 4.75	4.50 – 4.75	4.50 – 4.75
Mid-Western (Group 3 basis)	4.25 – 4.75	4.25 – 4.75	4.25 – 4.75	4.25 – 4.75	4.25 – 4.75	4.25 – 4.75
70-72 octane:						
Oklahoma	4.25 – 5.00	4.25 – 5.00	4.25 – 5.00	4.25 – 5.00	4.25 – 5.00	4.25 – 5.00
(a) North Texas	4.625– 5.00	4.625– 5.00	4.625– 5.00	4.625– 5.00	4.625– 5.00	4.625– 5.00
West Texas	4.875– 5.00	4.875– 5.00	4.875– 5.00	4.875– 5.00	4.875– 5.00	4.875– 5.00
East Texas	4.75	4.75	4.75	4.75	4.75	4.75
Mid-Western (Group 3 basis)	4.50 – 5.00	4.50 – 5.00	4.50 – 5.00	4.50 – 5.00	4.50 – 5.00	4.50 – 5.00
Motor Gasoline, 72-74 octane:						
New York harbor	6.25 – 6.70	6.25 – 6.70	6.25 – 6.70	6.25 – 6.70	6.25 – 6.70	6.25 – 6.70
Philadelphia district	6.25 – 6.75	6.25 – 6.75	6.25 – 6.75	6.25 – 6.75	6.25 – 6.75	6.25 – 6.75
Baltimore district	6.25 – 6.75	6.25 – 6.75	6.25 – 6.75	6.25 – 6.75	6.25 – 6.75	6.25 – 6.75
Motor Gasoline:						
65 octane (CFR Motor method)						
Bradford-Warren (Western Penna.)	5.75 – 6.25	6.25 – 6.75	6.25 – 6.75	6.25 – 6.75	6.25 – 6.75	5.75 – 6.25
66-68 octane (L-3)						
Bradford-Warren (Western Penna.)	5.75 – 6.25	6.25 – 6.75	6.25 – 6.75	6.25 – 6.75	6.25 – 6.75	5.75 – 6.25
Other Districts	6.00	6.00	6.00	6.00	6.00	6.00
"Q" Gasoline:						
Bradford-Warren (Western Penna.)	5.75 – 6.50	6.25 – 7.00	6.25 – 7.00	6.25 – 7.00	6.25 – 7.00	5.75 – 6.50
Other Districts (Western Penna.)	5.50 – 5.75	5.50 – 5.75	5.50 – 5.75	5.50 – 5.75	5.50 – 5.75	5.50 – 5.75
75-76 Octane: (L-3)						
Bradford-Warren (Western Penna.)	6.00 – 6.80	6.50 – 7.05	6.50 – 7.05	6.50 – 7.05	6.50 – 7.05	6.00 – 6.80
Other Districts (Western Penna.)	6.25	6.25	6.25	6.25	6.25	6.25

Refinery Prices

Gasoline

U. S. Motor (Oct. L-3) except where otherwise specifed

Prices Effective	Mar. 4	Feb. 26
OKLAHOMA		
62 oct. & below	3.75 – 4.125	3.75 – 4.125
63-66 oct.	4.00 – 4.4375	4.00 – 4.375
67-69 oct.	4.00 – 4.75	4.00 – 4.75
70-72 oct.	4.25 – 5.00	4.25 – 5.00
60-62 400 e.p.	(b) 3.875–4.25	(b) 3.875–4.25
MID-WESTERN		
62 oct. & below	3.75 – 4.125	3.75 – 4.25
63-66 oct.	(b) 4.00	(b) 4.00
67-69 oct.	4.25 – 4.75	4.25 – 4.75
70-72 oct.	4.50 – 5.00	4.50 – 5.00
N. TEX. (For shpt. to Tex. & N. M. dest'ns.)		
62 oct. & below	3.875– 4.25	3.875– 4.25
63-66 oct.	4.125– 4.25	4.125– 4.25
67-69 oct.	4.375– 4.50	4.375– 4.50
70-72 oct.	4.625– 5.00	4.625– 5.00
60-62, 400 e.p.	(b) 3.875–4.00	(b) 3.875–4.00
W. TEX. (For shpt. to Tex. & N. M. dest'ns.)		
62 oct. & below	(b) 4.00 –4.25	(b) 4.00 –4.25
63-66 oct.	(a) 4.50 –4.625	(a) 4.50 –4.625
67-69 oct.	(b) 4.50 –4.75	(b) 4.50 –4.75
70-72 oct.	(b) 4.875–5.00	(b) 4.875–5.00
CENT. W. TEX. (Prices to truck transports)		
62 oct. & below	(a) 4.00	(a) 4.00
63-66 octane	(a) 4.625	(a) 4.625
66-70 octane	(e)	(e)
E. TEX.		
70-72 oct.	(a) 4.75	(a) 4.75
60-62, 400 e.p.	(a) 4.25	(a) 4.25
KANSAS (For Kansas destinations only)		
62 oct. & below	(a) 4.375	(e) 4.375
67-69 oct.	(a) 4.625	(e) 4.625
70-72 oct.	(a) 5.125	(e) 5.125
N. LA. (For shipment to La. & Ark.)		
62 oct. & below	(a) 4.125–4.375	(a) 4.125–4.375
63-66 oct.	(a) 4.375–4.625	(a) 4.375–4.625
70-72 oct. leaded	(a) 4.875–5.125	(a) 4.875–5.125
ARK. (FOB Ark. plant of one refiner, for shipment to Ark. & La.)		
62 oct. & below	4.00	4.00
67-69 oct.	4.50	4.50
70-72 oct.	5.00	5.00
WESTERN PENNA. (Motor gasoline.)		
Bradford-Warren:		
U.S. Motor (58-62°)	(b) 5.00	(a) 5.00
65 oct. (CFR Motor Method)	5.75 – 6.25	(b) 6.25 – 6.75
66-68 oct. (L-3)	5.75 – 6.25	
"Q" gasoline	5.75 – 6.50	6.25 – 7.00
75-76 oct. (L-3)	6.00 – 6.80	6.50 – 7.05
Other districts:		
U.S. Motor (58-62°)	(a) 4.50	(a) 4.50
66-68 oct. (L-3)	(a) 6.00	(a) 6.00
"Q" gasoline	5.50 – 5.75	5.50 – 5.75
75-76 oct. (L-3)	(a) 6.25	(a) 6.25
CENTRAL MICHIGAN		
Str.-Run Gasoline	(g) 4.00–4.375	(g) 4.00 –4.25
U.S. Motor: (Oct. L-3)		
67-69 oct.	5.50 – 6.25	5.50 – 6.25
72-74 oct.	6.25 – 7.00	6.25 – 7.00
OHIO (S. O. Ohio quotations for statewide delivery and subject to exceptions for local price disturbances)		
70-72 oct. (ASTM M.M.)	7.00	7.00
CALIFORNIA U.S. Motor:		
54-58 grav., for instate shipment	6.00 – 9.25	6.00 – 9.25
54-58 grav., for outside state shipment	6.25 – 9.00	6.25 – 9.00
58-61 grav., 375-400 e.p., 65 oct. & above	7.25 – 9.75	7.25 – 9.75

(a) One refiner quoting. (b) Two refiners quoting. (c) One supplier quoting. (d) Two suppliers quoting. (e) No quotations reported. (f) Prices FOB Central Michigan refinery group basis for shipment within Michigan; shipments may originate at plants outside Central group. (g) Excluding Detroit shipment. (h) For shipment to Ark. points only. (i) Quotations. (j) Sale. (k) Sales.

REFINERY PRICES (Continued)

(Prices on this page are explained in note at top of Page 87)

Kerosine, Gas & Fuel Oils

Prices Effective	Mar. 4	Feb. 26
OKLAHOMA		
41-43 grav. w.w.	3.75 – 4.25	3.75 – 4.25
42-44 grav., w.w.	3.875– 4.625	3.875– 4.625
Range Oil	3.75 – 3.875	3.75 – 3.875
No. 1 P.W.	3.75 –3.8125	3.75 –3.8125
No. 1 straw	(b) 3.50 –3.75	3.50 – 3.75
No. 2 straw	3.50 – 3.625	3.50 – 3.625
No. 2 dark	(a)3.50	(b)3.50
U.G.I. gas oil	(b)3.25	(b)3.25
No. 3 fuel	3.375–3.4375	3.375–3.4375
No. 5 fuel		(e)
No. 6 fuel	(a)$0.50	(b)$0.50
14-16 fuel	(a)$0.85	(a)$0.85
MID-WESTERN		
41-43 grav. w.w.	3.75 – 4.25	3.75 – 4.25
42-44 grav. w.w.	3.875– 4.625	3.875– 4.625
Range oil	(b) 3.75 –4.00	(b) 3.75 –4.00
No. 1 p.w.	3.75 – 3.875	3.75 – 3.875
No. 1 straw	(b) 3.625–3.75	3.625– 3.75
No. 2 straw	3.50 – 3.625	3.50 – 3.625
No. 3	3.375– 3.50	3.375– 3.50
No. 5	(a)$0.70	(a)$0.70
No. 6	(b) $0.50–$0.55	(b) $0.50–$0.55
N. TEX. (For shpt. to Tex. & N.M. dest'ns.)		
41-43 grav. w.w.	(b) 3.875–4.00	(b) 3.875–4.00
No. 1 P.W.	(a)3.875	(a)3.875
E. TEX.		
41-43 grav. w.w.	(a) 3.50 –3.75	(a) 3.50 –3.75
No. 1 p.w.	(a)3.375	(a)3.375
KANSAS (For Kansas destinations only)		
41-43 gravity w.w.	(a)4.25	(a)4.25
42-44 gravity w.w.	(a)4.375	(a)4.375
No. 1 p.w.	(a)4.00	(a)4.00
No. 6 fuel	(b)$0.60	(b)$0.60
N. LA. (For shipment to La. and Ark.)		
41-43 grav. w.w.	(a) 3.75 –4.00	(a) 3.75 –4.00
10-14 gravity	(a) $0.65–$0.70	(a) $0.65–$0.70
ARK. (F.o.b. Ark. plant of one refiner for shipment to Ark. and La.)		
41-43 grav. w.w.	4.00	4.00
No. 1	3.875	3.875
No. 2	3.625	3.625
28-32 zero fuel	3.50	3.50
Tractor Fuel	(h)4.25	(h)4.25
WESTERN PENNA.		
Bradford-Warren:		
45 grav. w.w.	5.125– 5.25	(b)5.125
46 grav. w.w.	(a)5.375	(a)5.375
36-40 gravity	(a)4.75	4.875
Other districts:		
45 grav. w.w.	4.875– 5.00	4.875– 5.00
46 grav. w.w.	5.00 – 5.125	5.00 – 5.125
47 grav. w.w.	5.00 – 5.25	5.00 – 5.25
36-40 gravity	(b) 3.875–4.50	3.875– 4.50
CENTRAL MICHIGAN (f)		
47-49 gravity w.w.	4.80 – 5.00	4.80 – 5.00
P.W. Distillate	4.50 – 4.75	4.75
No. 3 gas oil, Str.	4.00 – 4.50	4.25 – 4.50
U.G.I. gas oil	3.00 – 3.75	3.00 – 3.75
Fuel Oils (Vis. at 100):		
500-700 Vis.	(b) 2.25 –3.25	(a)3.25
300-500 Vis.	(b) 2.50 –3.50	2.50 – 3.50
100-300 Vis.	(a) 3.50 –3.75	(a) 3.50 –3.75
CALIFORNIA		
40-43 grav. w.w.	4.50 – 6.00	4.50 – 6.00
San Joaquin Valley:		
Heavy fuel	$0.55 –$0.75	$0.55 –$0.75
Light fuel	$0.75 –$0.85	$0.75 –$0.85
Diesel fuel	2.75 – 4.00	2.75 – 4.00
Stove dist.	3.00 – 5.00	3.00 – 5.00
Los Angeles:		
Heavy fuel	$0.40 –$0.65	$0.45 –$0.65
Light fuel	$0.50 –$0.75	$0.50 –$0.70
Diesel fuel	2.25 – 4.00	2.25 – 4.00
Stove dist.	2.25 – 5.00	2.25 – 5.00
San Francisco:		
Heavy fuel	$0.80	$0.80
Light fuel	$0.90	$0.90
Diesel fuel	4.50	4.50
Stove dist.	5.50	5.50

Note: All above heavy fuels meet Pacific specification 400; light fuel, spec. 300; Diesel fuels, spec. 200; and stove distillate, spec. 100.

Lubricating Oils

Prices Effective	Mar. 4	Feb. 26
WESTERN PENNA.		
Viscous Neutrals —No. 3 col. Vis. at 70° F.		
200 Vis. (180 at 100°) 420-425 fl.		
0 p.t.	(a)30.50	(a)30.50
10 p.t.	(a)29.50	(a)29.50
15 p.t.	(a)28.50	(a)28.50
25 p.t.	27.00	27.00
150 Vis. (143 at 100) 400-405 fl.		
0 p.t.	(a)28.50	(a)28.50
10 p.t.	(a)27.50	(a)27.50
15 p.t.	(a)26.50	(a)26.50
25 p.t.	25.00	25.00

Cylinder Stocks

Brt. stk., 145-155 vis. at 210°, 540-550 fl., No. 8 col.		
10 p.t.	(a)27.50	(a)27.50
15 p.t.	(a)26.50	(a)26.50
25 p.t.	25.00 –27.00	25.00 –27.00
600 S.R. filterable	14.00 –14.50	(b)14.50
650 S.R.	16.00 –17.00	(b)17.00
600 fl.	17.00 –18.00	(b)18.00
630 fl.	20.00 –22.00	(b)22.00

MID-CONTINENT (F.o.b. Tulsa)

Neutral Oils (Vis. at 100° F. 0 to 10 P.P.)

Pale Oils:

Vis. Color		
60-85—No. 2	6.25 – 7.50	6.25 – 7.50
86-110—No. 2	6.50 – 8.00	6.50 – 8.00
150—No. 3	10.50 –13.75	12.25 –13.75
180—No. 3	12.00 –14.00	12.00 –14.00
200—No. 3	12.50 –14.50	12.50 –14.50
250—No. 3	13.50 –15.50	13.50 –16.00
280—No. 3	15.50 –17.25	15.50 –17.25
300—No. 3	16.50 –17.75	17.50 –17.75

Red Oils:

180—No. 5	(a)11.50	(e)13.50
200—No. 5	12.00 –13.00	12.00 –14.00
280—No. 5	14.75 –15.00	14.75 –16.00
300—No. 5	(b) 14.00–15.75	(b) 14.00–16.75

Note: Viscous Neutrals, 15-25 p.p. generally are quoted 0.5c under 0-10 p.p. oils. Non-viscous oils, 15-25 p.p., generally are quoted 0.25c under 0-10 p.p. oils.

Bright Stocks:

190-200 Vis. at 210° D.	(a)28.00	(a)29.00
150-160 Vis. at 210° D:		
0 to 10 p.p.	23.00 –25.00	24.00 –25.00
10 to 25 p.p.	22.00 –24.50	23.00 –24.50
25 to 40 p.p.	(b) 23.00–24.00	(b)24.00
150-160 vis. at 210° E.	21.00 –24.00	22.00 –24.00
120 Vis. at 210° D:		
0 to 10 p.p.	22.00 –23.375	22.75 –24.00
25 to 40 p.p.	(a)22.50	(a)22.50
600 S.R. Dark Green	(a)8.00	(a)8.00
600 S.R. Olive Green	9.00 – 9.50	9.00 – 9.50
631 S.R.	(a)20.00	(a)21.00
Black Oil	(b) 4.00 –5.50	(b) 4.00 –5.50

SOUTH TEXAS Neutral Oils

Vis. Color		
Pale Oils: (*Vis. at 100°F*)		
100 No. 1½-2½	5.75 – 6.00	5.75 – 6.00
200 No. 2-3	7.50 – 7.75	7.50 – 7.75
300 No. 2-3	8.00 – 8.25	8.00 – 8.25
500 No. 2½-3½	9.00 – 9.25	9.00 – 9.25
750 No. 3-4	9.50 – 9.75	9.50 – 9.75
1200 No. 3-4	9.875–10.50	9.875–10.50
2000 No. 4	10.00 –10.75	10.00 –10.75
Red Oils:		
200 No. 5-6	7.50 – 7.75	7.50 – 7.75
300 No. 5-6	8.00 – 8.25	8.00 – 8.25
500 No. 5-6	9.00 – 9.25	9.00 – 9.25
750 No. 5-6	9.50 – 9.75	9.50 – 9.75
1200 No. 5-6	9.875–10.50	9.875–10.50
2000 No. 5-6	10.00 –10.75	10.00 –10.75

Lubricating Oils (Cont'd.)

Prices Effective	Mar. 4	Feb. 26
CHICAGO		
Neutral Oils (Vis. at 100° F. 0 to 10 p.p.		
Pale Oils		
Vis. Color		
60-85—No. 2	8.00	8.00
86-110—No. 2	8.25	8.25
150—No. 3	11.75	11.75
180—No. 3	13.00	13.00
200—No. 3	13.50	13.50
250—No. 3	14.50	14.50
Red Oils:		
180—No. 5	12.50	12.50
200—No. 5	13.00	13.00
250—No. 5	13.50	13.50
280—No. 5	14.00	14.00
300—No. 5	15.00	15.00

Note: Viscous oils, 15 to 30 p.p. are quoted 0.5c lower; 60-85 and 86-110 No. 2 non-viscous oils, 15 to 30 p.p., 0.25c lower.

Unfiltered Steam Refined: (Viscosity at 210°)		
140	10.00	10.00
160	11.00	11.00
200	12.00	12.00
Bright stocks, 160 vis. at 210, No. 8 color:		
0 to 10 p.p.	23.75	23.75
15 to 25 p.p.	22.75	22.75
30 to 40 p.p.	22.25	22.25
E filtered Cyl. Stock	14.50	14.50

Note: To obtain prices delivered in Chicago, add 0.25c per gal.

Natural Gasoline

(Group 3 & Breckenridge prices are to blenders on freight basis shown below. Shipments may originate in any Mid-Continent manufacturing district.)

FOB GROUP 3		
Grade 26-70	(k)2.00	(k)2.00
FOB BRECKENRIDGE		
Grade 26-70	(i)1.75	(i)1.75
CALIFORNIA (FOB plants in Los Angeles basin)		
75-85, 350-375 e.p. for blending	5.75 – 6.00	6.00 – 6.25

Naphtha and Solvent

(FOB Group 3 as quoted by Chicago sellers)

Stoddard solvent	6.375	6.375
Cleaners' naphtha	6.875	6.875
V. M. & P. naphtha	6.875	6.875
Mineral spirits	5.875	5.875
Rubber solvent	6.875	6.875
Lacquer diluent	7.875	7.875

Wax

WESTERN PENNA. (Bbls., C.L., N. Y.)

White Crude Scale:		
122-124 A.m.p.	5.25 – 5.50	(b) 5.25 –5.50
124-126 A.m.p.	5.25 – 5.50	5.25 – 5.50

OKLAHOMA (Bbls. or burlap bags, C.L.)

124-A.m.p.	(b) 5.50 –5.75	(b) 5.50 –5.75

CHICAGO (FOB Chicago district refinery of one refiner, in bags or slabs loose, carloads. Melting points are EMP (ASTM) methods; add 3° F. to convert into AMP.)

Fully refined:		
122-124 (bags only)	6.10	6.10
125-127	6.10	6.10
127-129	6.35	6.35
130-132	6.65	6.65
132-134	6.90	6.90
135-137	7.65	7.65

Petrolatums

WESTERN PENNA. (Bbls., carloads; tank cars, 0.5c per lb. less.)

Snow White	6.875– 7.00	6.875– 7.00
Lily White	5.875– 6.00	5.875– 6.00
Cream White	4.875– 5.00	4.875– 5.00
Light Amber	3.50 – 3.625	3.50 – 3.625
Amber	3.25 – 3.375	3.25 – 3.375
Red	3.00 – 3.375	3.00 – 3.375

(a) One refiner quoting. (b) Two refiners quoting. (c) One supplier quoting. (d) Two suppliers quoting. (e) No quotations reported. (f) Prices FOB Central Michigan refinery group basis for shipment within Michigan; shipments may originate at plants outside Central group. (g) Excluding Detroit shipment. (h) For shipment to Ark. points only. (i) Quotations. (j) Sale. (k) Sales. (l) Pittsburgh district prices excluded.

SEABOARD PRICES EXPORT AND COASTWISE

(Prices on this page are explained in note at top of Page 87)

Atlantic Coast (FOB Refineries & Tanker Terminals)

Prices Effective Mar. 4

MOTOR GASOLINE

District:	60-64 Oct.	65-66 Oct.	68-70 Oct.	72-74 Oct.	KEROSINE and/or NO. 1 FUEL
N. Y. Harb.	6.25 – 6.70	(d) 6.50 –7.30	6.50 – 6.75	6.50 – 7.70	5.60 – 6.50
N. Y. Harb., barges	6.25 – 6.70	6.375– 7.05	6.375– 6.50	6.40 – 7.20	5.50 – 6.50
Albany	.....	.....	.....	7.60 – 7.80	(c)5.70
Philadelphia	6.25 – 6.75	(d) 6.50 –6.75	6.50 – 6.75	6.75 – 7.75	6.00 – 6.25
Baltimore	6.25 – 6.75	(d) 6.50 –6.75	6.50 – 7.00	6.75 – 7.75	(c)6.00
Norfolk	(d) 6.50 –6.75	(c)6.75	6.75 – 7.00	7.00 – 7.75	(d) 5.50 –6.00
Wilm'ton	6.50 – 6.75	(c)6.75	6.75 – 7.00	7.00 – 7.85	5.50 – 6.00
Char'ston	6.50 – 6.75	(c)6.75	(d)7.00	7.00 – 7.55	(d) 5.50 –6.00
Savannah	6.25 – 6.75	.....	6.75 – 7.00	7.00 – 7.25	5.50 – 5.625
Jacksonville	6.25 – 6.75	.....	6.75 – 7.00	7.00 – 7.25	5.50 – 5.625
Miami	(d) 6.25 –6.75	.....	(c)7.00	(d) 7.00 –7.25	(c) 5.50 –5.625
Tampa	6.25 – 6.75	.....	(c)7.00	7.00 – 7.25	5.50 – 5.625
Pensacola	(c) 6.50 –6.75	.....	.....	(c) 7.00 –7.25	(c) 5.50 –5.625
Mobile	6.00 – 6.50	.....	(c)6.25	6.75 – 7.00	(c) 5.50 –5.625
Portland	.....	.....	(c)7.50	7.60	(c)5.90
Boston	6.50 – 7.25	(r) 6.75 –7.25	6.75 – 7.25	6.75 – 7.50	(d) 5.70 –6.10
Providence	6.80 – 7.25	(m)7.25	(d) 6.75 –7.25	6.75 – 7.50	(d) 5.70 –6.10

FUEL OILS

	Nos. 2-3	No. 4	No. 5	No. 6
N. Y. Harb.	5.10 – 5.60	5.10 – 6.00	$1.70 –$1.85	$1.50
N. Y. Harb., barges	5.00 – 5.50	5.00 – 6.00	.....	.....
Albany	(c)5.20	(c)5.20	(c)$2.00	(c)$1.70
Philadelphia	4.75 – 5.60	4.50 – 5.35	$1.46 –$1.80	$1.25 –$1.50
Baltimore	(c)4.75	(c)4.50	(c)$1.47	(d) $1.25–$1.50
Norfolk	(c)5.25	.....	.....	(c)$1.50
Charleston	(c)5.50	.....	.....	.....
Savannah	.....	.....	.....	(c)$1.45
Jacksonville	.....	.....	.....	(c)$1.45
Tampa	.....	.....	.....	(c)$1.40
Portland	(c)5.40	(c)5.40	(c)$2.10	(c)$1.50
Boston	(d) 5.20 –5.70	(d) 5.20 –5.70	(d)$1.80	(c)$1.50
Providence	(d) 5.20 –5.70	(d) 5.20 –5.70	$1.75 –$1.90	(c)$1.50

	Bunker C Fuel Ships' bunkers	Diesel Oil Ships' bunkers	Diesel Oil Shore Plants	Gas House 28-34	Gas Oil Gravity
N. Y. harbor	(d)$1.50	$2.10 –$2.20	5.10	5.20	
Albany	.....	.....	5.20	....	
Philadelphia	$1.25 –$1.50	$2.10 –$2.20	5.00	....	
Baltimore	(c)$1.50	$2.10	....	....	
Norfolk	(c)$1.50	$2.10 –$2.20	....	....	
Charleston	.....	$1.90 –$2.20	....	....	
Savannah	(c)$1.45	$1.995	....	....	
Jacksonville	(c)$1.45	$1.995–$2.10	5.00	....	
Tampa	(c)$1.40	$1.995–$2.10	5.00	....	
Portland	(c)$1.50	$2.20	5.40	5.50	
Boston	(c)$1.50	$2.10 –$2.20	5.20	5.30	
Providence	(c)$1.50	$2.10 –$2.20	5.20	5.30	

New York Export Lubes

(Penna. Products in bbls. FAS New York)

Prices Effective	Mar. 4	Feb. 26
Bright stock:		
Light, 25 p.t.	(b) 34.00–36.00	(b) 34.00–36.00
Neutral oil:		
200 3 color, 25 p.t.	(a)36.00	(a)36.00
150 3 color, 25 p.t.	(b) 34.00–36.00	(b) 34.00–36.00
600 s.r., unfilt.	(b) 22.50–23.00	(b) 22.50–23.00
650 s.r., unfilt.	(b) 24.00–26.00	(b) 24.00–26.00
600 fl. s.r.	(b) 25.50–27.00	(b) 25.50–27.00
630 fl., s.r.	(b) 31.00–32.00	(b) 31.00–32.00

Wax

(A.S.T.M. Tests. Melting points, however, are A.M.P., 3° higher than E.M.P. Export prices, FAS. c.l. Domestic prices, FOB. refr'ies., in bags, c.l., with 0.2c discount allowed for shipment in bulk, except where noted. Scale solid; fully refined slabs in bags)

Prices Effective Mar. 4

	New Orleans Export	N. Y. Domestic	N. Y. Export
Crude Scale:			
124-6 Yellow	(a)5.25	.....	(a)5.25
122-4 White	.....	(b) 5.25–5.50	(b) 5.25–5.50
124-6 White	(b) 5.25–5.75	5.25 –5.50	5.25 –5.50
Fully Refined:			
123-5	....	(a)6.25	....
125-7	(a)7.25	(a)6.30	(a)7.25
128-30	(a)7.50	(b&h) 6.10-6.40	(a)7.50
130-2	(a)7.75	(a&h)6.60	(a)7.75
133-5	(a)8.25	(b&h) 6.65-6.85	(a)8.25
135-7	(a)8.75		(a)8.75
108-11 White Match	....	....	(a&i)6.50

Pacific Export

(c) (Quotations at seaboard, Los Angeles, cargo lots, except where otherwise noted.)

Prices Effective	Mar. 4	Feb. 26
U. S. Motor, under 65 octane	5.75 – 6.00	5.75 – 6.00
400 e.p. blend, 65 oct. min.	6.00 – 6.25	6.00 – 6.25
390 e.p. blend, 66 oct.	6.125– 6.375	6.125– 6.375
390 e.p. blend, 68 oct.	6.25 – 6.50	6.25 – 6.50
375 e.p. blend, 70 oct.	6.375– 6.75	6.375– 6.75
(d) 38-40 gravity, w.w. kerosine	4.25 – 5.00	4.25 – 5.00

Pacific Export (Cont'd)

Prices Effective	Mar. 4	Feb. 26
41-43 grav., w.w. kero.	4.50 – 5.00	4.50 – 5.00
44 grav., w.w. kero.	5.00 – 5.50	5.00 – 5.50
Diesel fuel, 24 & above	$1.25 –$1.35	$1.25 –$1.35
Diesel fuel, under 24	$1.15 –$1.25	$1.15 –$1.25
(f) 30-34 grav., diesel (gas oil)	$1.25 –$1.35	$1.25 –$1.35
(g) Grade C fuel	$0.68 –$0.73	$0.68 –$0.73
In Ships' Bunkers, or deep tank lots:		
(f) Diesel fuel	$1.35 –$1.45	$1.35 –$1.45
(g) Grade C fuel	$0.85 –$0.90	$0.85 –$0.90
Cased Goods: (Per case)		
U. S. M.	$1.45 –$1.55	$1.45 –$1.55
400 e.p. blend, under 65 oct.	$1.50 –$1.60	$1.50 –$1.60
375-400 e.p. blend, 65 oct. & above	$1.60 –$1.70	$1.60 –$1.70
(d) 40-43 grav., w.w. kero.	$1.40 –$1.50	$1.40 –$1.50
Kero., p.w.	$1.35 –$1.45	$1.35 –$1.45

Tanker Rates

(Approximate rates. Cents per bbl.)

Gulf-N. Atlantic: (not E. of N.Y.)	Last Paid	Owners Ask
Hvy. Crude & fuel, (10 to 19.9 gravity)	60c	60 to 62c
Light Crude, (30 Grav. or Lighter)	54c	54 to 56c
Gasoline	64c	65
Kerosine	67c	68
Light Fuel	70c	71

Gulf Coast

(FOB ship at Gulf for domestic and export; min. 20,000 bbls.)

Prices quoted by individual GCRA refiners on their products meeting GCRA specifications follow

Mar. 4

GCRA Spec. Motor Fuels (CFR octane)	
65 octane unleaded	5.75 – 6.00
68 octane unleaded	5.875– 6.25
70 octane unleaded	(b) 5.875–6.25
72-74 octane unleaded	.....
72-74 octane leaded	6.00 – 6.25

Gulf Coast (Cont'd)

March 4

GCRA Spec. Kerosine & Gas Oils	
Kerosine	(b) 4.625–4.75
43 or below diesel index gas oil	(a)4.00
43-47 diesel index gas oil	(b) 4.00 –4.125
48-52 diesel index gas oil	(b)4.25
53-57 diesel index gas oil	(b)4.375
58 & above	(b)4.50

Prices quoted by refiners for other products follow:

MOTOR GASOLINE

Mar. 4

	60-62 Gravity, 400 e.p.	61-63 Gravity, 390 e.p.	64-66 Gravity, 375 e.p.
60 oct. unleaded	5.00-5.50	(b)5.25-5.375	(b)5.375-5.50
65 oct. unleaded	5.25-6.00	(b)5.50-5.625	(b)5.625-5.75
68 oct. unleaded	5.50-6.25	(b)5.875-6.00	(b)6.00
70 oct. unleaded	(b)5.875-6.25	(a)6.125	(a)6.25
72-74 oct. leaded	5.25-6.25	(a)6.00	(a)6.00

KEROSINE, GAS & FUEL OILS

	Mar. 4	Feb. 26
41-43 grav. w.w. kero	4.50 – 4.75	4.25 – 4.50
Gas Oil (Less than ½ of 1% sulfur)		
Below 43 diesel index	(a)4.00	(a)4.00
43-47 diesel index	(b) 4.00 –4.125	(b) 4.00 –4.125
48-52 diesel index	4.125 – 4.25	4.125 – 4.25
53-57 diesel index	(b)4.375	(b)4.375
58 & above	(b)4.50	(a)4.50
No. 2 fuel	(b) 4.125–4.25	(a)4.125
(c) Diesel Oil	$1.70	$1.70
(c) Grade C bunker oil	$0.90 –$1.05	$0.90 –$1.05
Grade C bunker oil, cargoes	$0.90 –$1.05	$1.00 –$1.05

MID-CONTINENT LUBES

(At Gulf; in packages, FAS.; in bulk FOB terminals)

	Mar. 4 (v) Packages	Bulk
200 vis. D. 210 brt. stock	(a)35.50	(a)29.80
200 vis. E 210 brt. stock	(a)35.50	(a)29.80
150 vis. D 210 brt. stock 0-10 p.p.	(b) 31.50–33.00	(b) 25.80–27.00
10-25 p.p.	(a)30.50	(a)24.80
150 vis. E 210 brt. stock	.....	.....
100 vis. D 210 brt. stock 0-10 p.p.	(a)30.50	(a)24.80
10-25 p.p.	(a)29.50	(a)23.80
200 vis. No. 3 col. neutral:		
0-10 p.p.	(a)21.00	(a)15.30
10-25 p.p.	(a)20.50	(a)14.80
180 vis. No. 3 col. neutral:		
0-10 p.p.	(a)20.50	(a)14.80
10-25 p.p.	(a)20.00	(a)14.30

SOUTH TEXAS LUBES

(Vis. at 100°, c. t. 0, blk. exprt. shp., FOB terminals.)

Unfiltered Pale Oils: Vis. Color	Mar. 4	Feb. 26
100 No. 3	6.00 – 6.50	6.00 – 6.50
200 No. 3	7.50 – 8.50	7.50 – 8.50
300 No. 3	8.00 – 9.00	8.00 – 9.00
500 No. 3½	9.00 –10.50	9.00 –10.50
750 No. 4	9.50 –11.00	9.50 –11.00
1200 No. 4	10.00 –13.50	10.00 –13.50
2000 No. 4	10.25	10.25

Red Oils: Vis. Color		
100 No. 5-6	6.00 – 6.50	6.00 – 6.50
200 No. 5-6	7.50 – 8.50	7.50 – 8.50
300 No. 5-6	8.00 – 9.00	8.00 – 9.00
500 No. 5-6	9.00 –10.50	9.00 –10.50
750 No. 5-6	9.50 –11.00	9.50 –11.00
1200 No. 5-6	10.00 –13.50	10.00 –13.50
2000 No. 5-6	10.25	10.25

Naphtha

Prices Effective Mar. 4:	V.M.&P. Naphtha	Mineral Spirits
Baltimore	9.50	8.50
New York Harbor	9–9.5	8.75–9
Philadelphia district	10	8.25–9
Boston	9.5	9.5
Providence	9.5	9.5
†Ohio points, delivered	8.75	*8.25

*This is on rubber solvent.

†Ohio prices are those of S. O. Ohio. Its prices for D.C. naphtha, special Varnolene, Varnolene and Sohio Solvent are same as for V.M.&P.

(a) One refiner quoting. (b) Two refiners quoting. (c) One supplier quoting. (d) Two suppliers quoting. (e) No quotations reported. (f) Ships' bunkers. (g) Lighterage, additional at some points, not included. (h) For San Francisco cargo prices, add 5c per bbl. to cargo prices shown above. (i) Shipment in bags or in bulk. (j) Shipment in tight barrels.

TANK WAGON MARKETS

Tank car, tank wagon, dealer, and service station prices for gasoline **do not include taxes;** *they do, however, include inspection fees as shown in general footnote. Gasoline taxes, shown in separate column, include 1c federal, and state taxes; also city and county taxes as indicated in footnotes. Kerosine tank wagon prices also do not include taxes; kerosine taxes, where levied, are indicated in footnotes. Dealer discounts are shown in footnotes; for commercial consumer discounts, see NPN for Feb. 21, 1940. These prices in effect March 4, 1940 as posted by principal marketing companies at their headquarters offices, but subject to later correction.*

S. O. New Jersey

Esso
(Regular Grade)

	Consumer Tank Car	Dealer T.W.	Gasoline Taxes	Kerosine T.W.
*Atlantic City, N. J.	7.6	8.7	4	8.1
*Newark, N. J.	7.6	8.7	4	8.1
Annapolis, Md.	8.35	9.35	5	9.50
Baltimore, Md.	7.75	8.75	5	8.5
Cumberland, Md.	9.15	10.15	5	10
Washington, D. C.	8.0	9	3	9.5
Danville, Va.	8.95	11.45	6	11.5
Norfolk, Va.	7.75	10.25	6	11
Petersburg, Va.	8.05	10.55	6	11.7
Richmond, Va.	8.05	10.55	6	11
Roanoke, Va.	9.25	11.75	6	11.5
Charleston, W. Va.	8.55	11.05	6	12.6
Parkersburg, W. Va.	7.85	9.85	6	11.2
Wheeling, W. Va.	8.85	10.75	6	11.8
Charlotte, N. C.	9.9	11.4	7	11.8
Hickory, N. C.	10.45	11.95	7	12.3
Mt. Airy, N. C.	10.3	11.8	7	12.2
Raleigh, N. C.	9.65	11.15	7	11.5
Salisbury, N. C.	9.95	11.45	7	11.9
Charleston, S. C.	7.75	10.25	7	9.25
Columbia, S. C.	8.6	11.1	7	11.5
Spartanburg, S. C.	9.3	11.8	7	12.2

Discount to undivided dealers on Esso: thru territory, except New Jersey points, which see in "Note" below: Dealer t.w. price less 0.5c per gal.

*Effective Sept. 14, 1939, S. O. New Jersey posted a minimum retail resale price of 11.9c thru New Jersey.

Note: While the above posted prices continue at Atlantic City and Newark, N. J., dealers will pay a net price of 8.6c per gal. for Esso. Dealers having pumps marked only, Esso, Esso Extra and "Standard" White gasoline will pay 8.1c per gal. for Esso.

Kerosine Discount: 1c off t.w. price for 25 gals., or more, under contract thru territory (Baltimore City contract not necessary) except no discount in state of New Jersey.

Socony-Vacuum Oil Co., Inc.

(S. O. New York Division)

Socony Mobilgas
(Regular Grade)

	Consumer Tank Car	"Split" Dealer T.W.	Gasoline Taxes	Kerosine T.W.
Metropolitan N. Y. City: Boroughs of Manhattan, Bronx and Brooklyn (Kings and Queens)	7.7	9.2	*5	8.50
Borough of Richmond (Staten Is.)	7.7	9.2	*5	8.50
Albany, N. Y.	7.6	9.2	5	8.30
Binghamton, N. Y.	8.9	9.5	5	9.30
Buffalo, N. Y.	8.1	9.5	5	8
Jamestown, N. Y.	7.7	9.5	5	7.9
Plattsburg, N. Y.	8.1	10.6	5	8.90
Rochester, N. Y.	8.3	10	5	8.6
Syracuse, N. Y.	8.2	9.5	5	8.80
Bridgeport, Conn.	7.8	8.8	4	8.0
Danbury, Conn.	8.3	9.6	4	9
Hartford, Conn.	7.9	9.3	4	8.40
New Haven, Conn.	7.8	8.8	4	7.5
Bangor, Me.	7.9	10	5	8.0
Portland, Me.	7.6	9.4	5	8.50
Boston, Mass.	7.5	9	4	8.50
Concord, N. H.	8.4	10.7	5	9.10
Lancaster, N. H.	9.2	11.7	5	9.90
Manchester, N. H.	8.3	10.3	5	8.90
Providence, R. I.	7.5	9.3	4	8.50
Burlington, Vt.	8.1	10.4	5	8.70
Rutland, Vt.	8.5	10.5	5	8.90

*Plus 2% city sales tax computed at time of each sale.

Discount to undivided dealers: 0.5c less than "split" dealer t.w.

Atlantic Refining

Atlantic White Flash Gasoline
(Regular Grade)

	Commercial Tank Car	Dealer T.W.	Gasoline Taxes	Kerosine T.W.
Philadelphia, Pa.	7	9	5	10.5
Pittsburgh	8	9.5	5	10.5
Allentown	8	9.5	5	10.5
Erie	8	9.5	5	10
Scranton	7.5	10	5	10.5
Altoona	8	10	5	10.5
Emporium	8	10	5	10.5
Indiana	8	10	5	10.5
Uniontown	8	10	5	10.5
Harrisburg	8	9.5	5	10.5
Williamsport	8.5	10	5	10.5
Dover, Del.	...	8.5	5	10.5
Wilmington	...	9	5	10
Boston, Mass.	...	9	4	8.5
Springfield, Mass.	...	9	4	9.0
Worcester, Mass.	...	9.5	4	8.0
Fall River, Mass.	...	8.5	4	8.5
Hartford, Conn.	...	9.3	4	8.5
New Haven, Conn.	...	8.8	4	8.5
Providence, R. I.	...	9.3	4	8.5
Atlantic City, N. J.	...	8.6	4	8.1
Camden, N. J.	...	8.6	4	8.1
Trenton, N. J.	...	8.6	4	8.1
Annapolis, Md.	...	9.35	5	10.5
Baltimore, Md.	...	8.75	5	9.5
Hagerstown, Md.	...	9.85	5	10
Richmond, Va.	...	10.55	6	11
Wilmington, N. C.	...	10.35	7	10.8
Brunswick, Ga.	...	10	7	*11
Jacksonville, Fla.	...	9	8	10

*Georgia has kerosine tax of 1c per gal., not included in above price.

Discount to undivided dealers on gasoline: Dealer t.w. less 0.5c per gal. except in Georgia and Florida, dealer t.w. and undivided dealer price is same.

Discounts on gasoline: At Scranton, Pa., 1c per gal. voluntary discount allowed to dealers only, effective July 8, 1939.

Kerosine discount: Thru Pennsylvania and Delaware, 2c per gal. off t.w. price on t.w. deliveries of 25 gals. or more at one time, effective since Oct. 29, 1936.

S. O. Ohio

Sohio X-70 Gasoline
(Regular Grade)

	Consumer T.W.	†Divided Dlr.	‡S.S.	Gasoline Taxes	Kerosine T.W.
Ohio, Statewide	10.5	9.5	12.5	5	*12
Akron	10.5	8.5	10.5	5	*8.5
Cincinnati	10.5	9	11.5	5	*12
Cleveland	10.5	8.5	11	5	*12
Columbus	10.5	9	11.5	5	*12
Dayton	10.5	9	11.5	5	*12
Marietta	10.5	9	11.5	5	*12
Portsmouth	10.5	9.5	12.5	5	*12
Toledo	10.5	7.5	9.5	5	*12
Youngstown	10.5	9	11.5	5	*11.5

Renown Gasoline
(Third Grade)

Ohio, Statewide	10.5	9.5	12.5	5	....
Akron	10.5	8.5	10.5	5	....
Cincinnati	10.5	9	11.5	5	....
Cleveland	10.5	8.5	11	5	....
Columbus	10.5	9	11.5	5	....
Dayton	10.5	9	11.5	5	....
Marietta	10.5	9	11.5	5	....
Portsmouth	10.5	9.5	12.5	5	....
Toledo	10.5	7.5	9.5	5	....
Youngstown	10.5	9	11.5	5	....

Note: Prices at other Ohio points may be obtained by writing NPN.

*Ohio has kerosine tax of 1c per gal., not included in above prices.

†This price also to authorized agents, exclusive of 0.5c rental.

‡Prices are at company-operated service stations.

Discount to undivided dealers: 0.5c less than divided dealer t.w.

Sales tax: Ohio's 3% sales tax, effective Jan. 27, 1935, is added "where assessable to regular posted prices", S. O. Ohio says.

S. O. Kentucky

Crown Gasoline
(Regular Grade)

	Consumer T.W.	Net Dlr.	Gasoline Taxes	Kerosine T.W.
Covington, Ky.	8.5	8.5	6	9.5
Lexington, Ky.	10.5	10.5	6	10
Louisville, Ky.	9.5	9.5	6	9
Paducah, Ky.	9.5	9.5	6	9
Jackson, Miss.	9	9	7	*9.5
Vicksburg, Miss.	9.5	9.5	7	*9
Birmingham, Ala.	10.5	10.5	*8	9
Mobile, Ala.	9.5	9.5	*9	8
Montgomery, Ala.	10.5	10.5	*9	*10
Atlanta, Ga.	10	10	7	*9
Augusta, Ga.	10.5	10.5	7	*9
Macon, Ga.	9.5	9.5	7	*10
Savannah, Ga.	9.5	9.5	7	*8
Jacksonville, Fla.	9	9	8	8
Miami, Fla.	9	9	8	8
Pensacola, Fla.	9.5	9.5	*9	8.5
Tampa, Fla.	13	10	8	8

****Standard or Kyso Gasoline**
(Third Grade)

Covington, Ky.	7.5	7.5	6	....
Lexington, Ky.	9.5	9.5	6	....
Louisville, Ky.	7.5	7.5	6	....
Paducah, Ky.	8	8	6	....
Jackson, Miss.	8	8	7	....
Vicksburg, Miss.	8.5	8.5	7	....
Birmingham, Ala.	8	8	*8	....
Mobile, Ala.	7.5	7.5	*9	....
Montgomery, Ala.	9	9	*9	....
Atlanta, Ga.	6.5	6.5	7	....
Augusta, Ga.	9.5	9.5	7	....
Macon, Ga.	8.5	8.5	7	....
Savannah, Ga.	8	8	7	....
Jacksonville, Fla.	8	8	8	....
Miami, Fla.	8	8	8	....
Pensacola, Fla.	8	8	*9	....
Tampa, Fla.	11.5	9	8	....

Temporary discounts to tank wagon consumers at Tampa: on Crown gasoline, 3c per gal. below consumer t.w. price; on Standard, 2.5c.

**Taxes*: In the tax column is included these city and county gasoline taxes at the following points: Mobile, 2c city; Birmingham, 1c city; Montgomery 1c city and 1c county; Pensacola, 1c city. Georgia and Montgomery, Ala. have kerosine taxes of 1c per gal., and Mississippi 0.5c, not included in above prices.

**Standard Gasoline, a leaded third-grade, is sold in Kentucky, Alabama, Georgia and Florida; Kyso Gasoline, an unleaded third-grade, is sold in Mississippi.

S. O. Indiana

Red Crown (*Regular Grade*)
Stanolind (*Third Grade*)

	Red Dealer Prices: Crown Cons. T.W.	Stanolind T.W.	Gasoline Taxes	Kerosine Taxes	Kerosine T.W.
Chicago, Ill.	11.1	9.1	6.9	4	10
Decatur, Ill.	11.1	8.1	6	4	8.5
Joliet, Ill.	11.1	9.6	6.7	4	10
Peoria, Ill.	11.1	8.7	8.1	4	10
Quincy, Ill.	10.9	9.4	8.5	4	9.8
Indianapolis, Ind.	11.8	9.3	8.4	5	*10
Evansville, Ind.	11.6	10.1	9.4	5	*10.5
South Bend, Ind.	11.8	10.3	7.3	5	*10
Detroit, Mich.	9.6	8.1	7.6	4	7.6
Grand Rapids, Mich.	9.2	6.3	6.3	4	9
Saginaw, Mich.	10.8	9.3	8.6	4	9.3
Green Bay, Wis.	11.9	10.4	9.9	5	10
Milwaukee, Wis.	11.3	9.8	9.3	5	10.2
La Crosse, Wis.	11.5	10	9.5	5	10.4
Minneapolis-St. Paul	11.5	9.5	9	5	10.4
Duluth, Minn.	11.9	10.4	9.9	5	10.8
Mankato, Minn.	11.5	10	9.5	5	10.4
Des Moines, Ia.	10.9	8.4	7.4	4	*9.8
Davenport, Ia.	11.1	9.6	7.5	4	*10
Mason City, Ia.	11.3	9.8	6.9	4	*10.2
St. Louis, Mo.	10.7	9.2	7.5	*4	8
Kansas City, Mo.	10.4	8.9	6.9	*4	8
St. Joseph, Mo.	10.4	8.0	7.5	*4	7.9
Fargo, N. D.	12.7	11.2	10.7	5	11.6
Huron, S. D.	12	10.5	10	5	10.9
Wichita, Kans.	9.3	7.1	5.5	4	7

*Taxes: in the tax column is included these city and state gasoline taxes at following points: Kansas City, St. Joseph and St. Louis, 1c city tax. Kerosine taxes: Indiana has 4c, Iowa 3c per gal. state tax, not included in above prices.

S. O. Nebraska

Standard Red Crown Gasoline
(Regular Grade)

	T.W.	Dealer	Gasoline Taxes	Kerosine T.W.
Omaha, Neb.	10.5	6.9	6	9.8
McCook	10.5	7.9	6	9
Norfolk	10.5	8.4	6	9.5
North Platte	11.8	8.9	6	10
Scottsbluff	12.5	9.5	6	10

S. O. Louisiana

Esso
(Regular Grade)

	Consumer Tank Car	Dealer T.W.	Gasoline Taxes	Kerosine T.W.
Little Rock, Ark.	7.25	9.75	7.5	10
Alexandria, La.	6.75	9.25	8	*9.5
Baton Rouge, La.	6.75	9.25	8	*9.5
New Orleans, La.	6.75	9.25	8	*9
Lake Charles, La.	6.75	9.25	8	*11.5
Shreveport, La.	5.5	8	8	*8
Lafayette, La.	7	9.5	8	*9
Bristol, Tenn.	10.25	9.75	8	13
Chattanooga, Tenn.	9.5	12	8	12
Knoxville, Tenn.	10	12.5	8	13
Memphis, Tenn.	8	10.5	8	11
Nashville, Tenn.	9	9.5	8	11

*Taxes: Louisiana has kerosine tax of 1c per gal.; in addition New Orleans has 1c parish tax, none of which are included in above prices.

Price basis to dealers: Undivided dealers get dealer price, less 0.5c.

Above prices include these inspection fees on both gasoline and kerosine unless otherwise specified, per gallon, figured on basis of 50 gallons per barrel:
Alabama, 1/40c on gasoline, 1/2c on kerosine; Arkansas, 1/5c per gal. in a single barrel, 1/20c per gal. in bulk; Florida, 1/8c; Illinois, 3/100c; Indiana, 1/5c per gal. in lots up to 25 bbls.; 2/25c per gal. in lots of 25 bbls. or more; Kansas, 1/50c, (3/50c can be charged to meet inspection department expenses); Louisiana, 1/32c; Minnesota, 1/25c; Missouri, 3/100c; Nebraska, 3/100c; Nevada, gasoline, 1/20c; North Carolina, 1/4c; North Dakota, 1/20c; Oklahoma, 2/25c per gal. lots of more than 50, in bbls., 1/5c in lots less than 50 bbls.; South Carolina, 1/8c; South Dakota, 1/10c; Tennessee, 2/5c; and Wisconsin, 3/100c.
Kerosine inspection fee only: Iowa, 3/50c; Michigan, 1/5c per gal.

TANK WAGON MARKETS

Tank car, tank wagon, dealer, and service station prices for gasoline **do not include taxes;** *they do, however, include inspection fees as shown in general footnote. Gasoline taxes, shown in separate column, include 1c federal, and state taxes; also city and county taxes as indicated in footnotes. Kerosine tank wagon prices also do not include taxes; kerosine taxes, where levied, are indicated in footnotes. Dealer discounts are shown in footnotes; for commercial consumer discounts, see NPN for Feb. 21, 1940. These prices in effect March 4, 1940 as posted by principal marketing companies at their headquarters offices, but subject to later correction.*

Humble Oil & Refining Co.

Humble Motor Fuel
(Regular Grade)

	*T.W.	S.S.	Gasoline Taxes	Kerosine T.W.
Dallas, Tex	7	11	5	7
Ft. Worth, Tex	7	11	5	7
Houston, Tex	8.5	12.5	5	8
San Antonio, Tex	8	12	5	8

Thriftane
(Leaded, 67 Octane, Purple Gasoline)

Dallas	5.5	9	5	
Ft. Worth	5.5	9	5	
Houston	7	10.5	5	
San Antonio	6	10	5	

*These tank wagon prices apply to all classes o dealers and consumers.

Continental Oil

Conoco Bronz-z-z (Regular Grade)

	††T.W.	Dealer	Gasoline Taxes	Kerosine ‡T.W.
Denver, Col	9	..	5	11.5
Grand Junction, Col	12.5	..	5	15
Pueblo, Col	10	..	5	9
Casper, Wyo	11.5	..	5	11.5
Cheyenne, Wyo	10.5	..	5	13
Billings, Mont	12	..	6	12
Butte, Mont	13	..	6	13
Great Falls, Mont	12	..	6	12
Helena, Mont	12.5	..	6	12.5
Salt Lake City, Utah	10.5	10.5	5	14
Boise, Ida	**15.1	**15.1	6	16
Twin Falls, Ida	**15.1	**15.1	6	16.5
Albuquerque, N. M	8	..	†6.5	10
Roswell, N. M	9.5	9.5	†6.5	8
Santa Fe, N. M	10.5	10.5	*7	10
Ft. Smith, Ark	9.5	..	5	7.5
Little Rock, Ark	9.25	..	7.5	8
Texarkana, Ark	8	..	5	7
Muskogee, Okla	8	7	5	7
Oklahoma City, Okla	6	..	5	6.5
Tulsa, Okla	6	..	5	7

Demand Gasoline
(Third Grade)

Denver, Col	8	..	5	....
Grand Junction, Col	11.5	..	5	....
Pueblo, Col	9	..	5	....
Casper, Wyo	10.5	..	5	....
Cheyenne, Wyo	9.5	..	5	....
Billings, Mont	11	..	6	....
Butte, Mont	11	..	6	....
Great Falls, Mont	11	..	6	....
Helena, Mont	11.5	..	6	....
Salt Lake City, Utah	9.5	9.5	5	....
Boise, Ida	**14.1	**14.1	6	....
Twin Falls, Ida	**14.1	**14.1	6	....
Albuquerque, N. M	7	..	†6.5	....
Roswell, N. M	8.5	8.5	†6.5	....
Santa Fe, N. M	9.5	9.5	*7	....
Ft. Smith, Ark	7	..	5	....
Little Rock, Ark	7.5	..	7.5	....
Texarkana, Ark	6	..	5	....
Muskogee, Okla	7	6	5	....
Oklahoma City, Okla	5.5	..	5	....
Tulsa, Okla	5	..	5	....

†Includes city tax of 0.5c.
*Includes 1c city tax.
‡Prices are in t.w. deliveries to consumers and dealers.
**Prices include 0.1c to cover 1-mill tax for toll bridges.
††T.w. prices represent prices to consumer; also to dealers at points where no dealer prices are shown.

S. O. California

Standard Gasoline
(Regular Grade)

	T.W.	S.S.	Gasoline Taxes	Kerosine T.W.
San Francisco, Cal	13.5	14.5	4	11.5
Los Angeles, Cal	13	14	4	10
Fresno, Cal	14.5	15.5	4	12.5
Phoenix, Ariz	14	15	6	*12.5
Reno, Nev	15.5	16.5	5	13.5
Portland, Ore	14	15	6	13.5
Seattle, Wash	14	15	6	†13.5
Spokane, Wash	15.5	16.5	6	†16.5
Tacoma, Wash	14	15	6	†13.5

Flight Gasoline
(Third Grade)

San Francisco, Cal	12	13	4	....
Los Angeles, Cal	11.5	12.5	4	....
Fresno, Cal	13	14	4	....
Reno, Nev	14	15	5	....
Phoenix, Ariz	11	12	6	....
Portland, Ore	12.5	13.5	6	....
Seattle, Wash	12.5	13.5	6	....
Spokane, Wash	13	14	6	....
Tacoma, Wash	12.5	13.5	6	....

*Arizona has kerosine tax of 5c per gal. not included in above prices.

†Washington has 0.25c per gal. tax on kerosine sales not included in above prices.

Discount to 100% dealers, thru territory, off posted t.w. prices, on gasolines: on Standard Ethyl, Standard Gasoline and Stanavo Aviation, 3c per gal.; on Flight gasoline, 2c.

Canada

PRICES OF IMPERIAL OIL LTD.
Per Imperial Gallon, which is 1.2 U. S. Gallons
3-Star Imperial Gasoline
(Regular Grade)

	T.W.	Gasoline Taxes	Kerosine T.W.
Hamilton, Ont	15.5	8	16
Toronto, Ont	15.5	8	16
Brandon, Man	21	7	22
Winnipeg, Man	19.5	7	20.5
Regina, Sask	18.5	7	20.5
Saskatoon, Sask	21	7	23
Edmonton, Alta	18.9	7	20.9
Calgary, Alta	16	7	18
Vancouver, B. C	16	7	23
Montreal, Que	16	8	16.5
St. John, N. B	15	10	19
Halifax, N. S	15	10	19

Discounts to undivided dealers, 1c off t.w. price, except Maritime Provinces where undivided dealers pay t.w. price. Divided dealers pay t.w. price, thru territory

Aviation Gasoline

Following are tank car, tank wagon or dealer prices, as indicated, of aviation gasoline in several marketing territories.

S. O. OHIO
Thru Ohio
Esso Aviation

	Consumer T.W.	Gasoline Taxes
74 octane	16	5
80 octane	17	5
87 octane	18	5

Discounts: For delivery on contract to hangar operators and resellers: 2c below consumer posted t.w. price, shown above.

S. O. INDIANA
Stanavo Aviation Gasoline
73 Octane Number

Chicago, Ill	14.9	
Detroit, Mich	16.5	4
Milwaukee, Wis	15.1	5
Minneapolis, Minn	15.3	5
St. Louis, Mo	14.5	3
Kansas City, Mo	14.2	*4
Fargo, N. D	16.5	5
Huron, S. D	15.8	5

*Includes 1c city tax.

HUMBLE OIL & REFINING CO.
74 Octane Aviation Gasoline, Clear

	Tank Car
FOB Baytown, Tex	8.5

CONTINENTAL OIL CO.
Conoco Special Gasoline

	T.W. & Dealer Price	Gasoline Taxes
Denver, Colo	15	5
Cheyenne, Wyo	15.5	5
Helena, Mont	22.5	6
Salt Lake City, Utah	18	5
Albuquerque, N. M	14	*6.5

*Includes city tax of 0.5c.

S. O. CALIFORNIA
Stanavo Aviation Gasoline

	T.W.	
Phoenix, Ariz	17.5	6
Los Angeles, Cal	15	4
San Francisco, Cal	15.5	4
Reno, Nev	17.5	5
Portland, Ore	16	6
Seattle, Wash	16	6
Spokane, Wash	19	6

Note: For discounts, etc., see note under Standard and Flight gasoline above.

Naphtha (In Tank Wagon)

S. O. NEW JERSEY
Posted Tank Wagon Prices

	Mineral Spirits	V.M.&P.
Newark, N. J	11.5	15.5
Baltimore, Md	15.5	....
Washington, D. C	15	....

Discounts: Buyers taking following quantities at one time, get these discounts. Newark, 2c per gal. on 200 gals. or more; less than 200 gals., 0.5c higher price. Baltimore 2c off on 25 to 100 gals. and 3c on over 100 gals. Washington, 2c off to contract buyers.

SOCONY-VACUUM OIL CO.

Buffalo, N. Y	11.5	12.5
*New York City	9.5	10.5
Rochester, N. Y	12.5	12.5
Syracuse, N. Y	12.5	15
Boston, Mass	11.5	11.5
Bridgeport, Conn	11.5	12
Hartford, Conn	11	11.5
Providence, R. I	11.5	12.5

*Prices apply to consumers only in quantities over 1,000 gals. annually. For quantities under 1,000 gals. annually, add 0.5c per gal.

ATLANTIC REFINING CO.

Philadelphia, Pa	12	14.5
Lancaster, Pa	13.5	16
Pittsburgh, Pa	14.5	14.5

Note: Prices for Mineral Spirits also apply to Stoddard Solvent; and prices for V.M.&P. Naphtha apply also to Light Cleaners Naphtha.

Discounts: Philadelphia, 200 gals. or more at one time, 2c per gal. less. Lancaster, contract buyers taking 1,000 gals. or more per year, one drum up, 2c per gal. less; non-contract buyers, 200 gals. or more at one time, 2c per gal. less. Pittsburgh, 500 gals. or more at one time, 2c.

S. O. OHIO

	S.R. Solvent	V.M.&P. Naphtha
Thru Ohio	12.5	13

Note: V.M.&P. naphtha prices also apply on Dry Cleaners naphtha, special Varnolene, Varnolene and Sohio Solvent. Discounts to contract consumers off t.w. price; 300 to 999 gals., 0.5c; 1,000 to 2,499 gals., 0.75c; 2,500 to 4,999 gals., 1c; 5,000 or more gals., 1.5c.

S. O. INDIANA
(Prices include state and federal taxes)

	Oleum Spirits	V.M.&P. Naphtha	Stanisol
Chicago, Ill	16.7	17	16.4
Detroit, Mich	19.7	18.7	20.2
Kansas City, Mo	14.4	15.4	14.9
St. Louis, Mo	14.7	15.7	13.4
Milwaukee, Wis	19.3	20.3	19.8
Minneapolis, Minn	19.5	20.5	18.2

Note: All prices, with exception of Missouri points, include state tax. Prices shown are base prices, before discounts.

Price Changes

Dates and amounts of changes. See table for full current prices.

S. O. New Jersey—Kerosine:
Wheeling t. w. cut 0.4c, March 1.

Correction—Socony-Vacuum—Kerosine:
Danbury t. w. should have been 9c since Jan. 25, instead of 7.5c, as carried in NPN of Feb. 21 and Feb. 28.

Atlantic Refining—Kerosine:
Philadelphia t. w. up 0.5c, Feb. 29.

S. O. Kentucky—Crown and Standard Gasoline:
Covington t. w. and net dlr. cut 0.5c, Feb. 3.

Kerosine:
Macon t. w. up 0.5c, Feb. 15.

S. O. Indiana—Stanolind Gasoline:
Joliet dealer price cut 0.7c, Feb. 22.

Kerosine:
Grand Rapids t. w. cut 0.7c, Feb. 27.

S. O. Louisiana—Kerosine:
Lafayette t. w. cut 1c, Feb. 24.

Continental Oil—Conoco Bronz-z-z:
Billings t. w. cut 0.5c, Butte cut 1c, Great Falls cut 1.5c, and Helena cut 2c, Feb. 23.
Little Rock t. w. cut 0.5c, Feb. 21.

Demand Gasoline:
Billings and Great Falls t. w. cut 0.5c, Helena cut 2c, Feb. 23.

Kerosine:
Billings t. w. cut 1c, Butte cut 2.5c, Great Falls cut 3.5c and Helena cut 3c, Feb. 23.
Salt Lake City and Boise t. w. cut 2c and Twin Falls cut 1.5c, Feb. 26.

Fuel Oil

Atlantic Refining—Nos. 1, 2, 3 and 4:
Philadelphia No. 1 t. w. up 0.5c, Feb. 29.
Allentown Nos. 2, 3 and 4 cut 0.25c, Feb. 27.

TANK WAGON MARKETS, HEATING OILS

Prices in Effect March 4, 1940

Following are posted tank wagon prices of various grades of heating oil at the points shown in various territories. Prices are in cents per gallon.

SOCONY-VACUUM OIL CO. INC.
(S. O. New York Division

	Nos. 2 & 3	No. 4
New York City	7.00	7.00
Albany, N. Y.	7.20	6.70
Rochester, N. Y.	7.50	7.50
Boston, Mass.	7.20	7.20
Bangor, Me.	7.60	7.60
Manchester, N. H.	7.00	7.00
Burlington, Vt.	7.90	7.90
Hartford, Conn.	7.30	7.30
New Haven, Conn.	7.20	7.20
Providence, R. I.	7.20	7.20

Note: Prices for No. 1 fuel in Socony-Vacuum territory same as for kerosine which see in tank wagon table for various cities; prices change with kerosine.

ATLANTIC REFINING

	Numbers 1	2	3	4	5	6
Phila., Pa.	8.5	7.00	7.00	7.00	4.25	3.50
Allentown, Pa.	8.5	6.75	6.75	6.75	....	....
Wilmington, Del.	8.00	7.00	7.00	7.00	....	....
Springfield, Mass.	9.0	7.7	....	....	....	....
Worcester, Mass.	8.0	7.0	....	7.0	....	....
Hartford, Conn.	8.5	7.3	....	7.3	....	....

S. O. OHIO

	No. 1	No. 2	No. 3
Toledo	7.50	7.50	7.50
Rest of Ohio	7.50	7.50	7.00

Note: S. O. Ohio prices are for full compartment hose dumps, bucket dumps are 0.5c per gallon higher.

S. O. INDIANA
Stanolex Fuel and Furnace Oils

	No. 1 Fuel	Stanolex Furnace
Chicago	(a)6.75	6.75
Indianapolis	....	(b)7.8
Detroit	....	6.6
Milwaukee	8.4	7.7
Minneapolis	7.8	7.8
St. Louis	7.7	(c)6.7
Kansas City	6.8	6.8

(a) For 400 gals. and over; 150 to 399 gals., 7.25c; 1 to 149 gals., 8.25c.
(b) Excluding 4c state tax.
(c) For 400 gals. & over; 100 to 399 gals., 7c; 1 to 99 gals., 8c.
Note: Small-lot deliveries of light fuel oils range up to 2c higher than above quotations.

Sinclair Sponsors News Broadcasts

News broadcasts from European capitals for 15 minutes, three times a week, will be sponsored by Sinclair Refining Co. over 72 stations on the Columbia network, starting April 3.

Scheduled for Monday, Wednesday and Friday, 6:45-7:00 p.m., the series, "The World Today," will continue a program now heard.

Group 3 Freight Rates

To Division Headquarters Points of Standard Oil Co. of Indiana

	Gasoline-Kerosine Cents per Cwt.	Gasoline-Kerosine Cents per gal. 6.6 lbs.	Distillate-Gas Oil-Fuel Oil Cents per Cwt.	Distillate-Gas Oil-Fuel Oil Cents per gal. 7.4 lbs.
Chicago, Ill.	40	2.640	32	2.368
Decatur, Ill.	39	2.574	31	2.294
Joliet, Ill.	40	2.640	32	2.368
Peoria, Ill.	39	2.574	31	2.294
Quincy, Ill.	36	2.376	29	2.146
Indianapolis, Ind.	48	3.168	39	2.886
Evansville, Ind.	46	3.036	37	2.738
South Bend, Ind.	49	3.234	**42	**3.108
Detroit, Mich.	64	4.224	51	3.774
Gd. Rapids, Mich.	61	4.026	50	3.700
Saginaw, Mich.	66	4.356	53	3.922
Green Bay, Wis.	51	3.366	41	3.034
Milwaukee, Wis.	43	2.838	34.5	2.553
LaCrosse, Wis.	46	3.036	37	2.738
Min'ap'ls-St. Paul	46	3.036	37	2.738
Duluth, Minn.	52	3.432	41.5	3.071
Mankato, Minn.	46	3.036	37	2.738
Des Moines, Ia.	36	2.376	29	2.146
Davenport, Ia.	39	2.574	31	2.294
Mason City, Ia.	42	2.772	33.5	2.479
St. Louis, Mo.	33	2.178	26.5	1.961
Kansas City, Mo.	28	1.848	22.5	1.665
St. Joseph, Mo.	28	1.848	22.5	1.665
Fargo, N. D.	63	4.158	50.5	3.737
Minot, N. D.	83	5.478	66.5	4.921
Huron, S. D.	53	3.498	42.5	3.145
Wichita				
From Ponca City	7.5	*0.495	7.5	†0.555
From Tulsa	12.5	*0.825	12.5	†0.925
From Cushing	11	*0.726	11	†0.814

*This rate also includes distillate rate at 6.6 lbs. per gal.

**This rate applies only to residual fuel and gas oil. Combination rate of 32c per cwt. at 7.4, Group 3 to Chicago, plus 9c per cwt. at 6.6, Chicago to South Bend, total of 2.962c per gal., applies to petroleum fuel oil distillate not suitable for illuminating purposes.

†This rate is exclusive of distillate which is based on 6.6 lbs. per gal. from Ponca City, Tulsa and Cushing, Okla., to Wichita. Includes only gas oil and fuel oil.

NOTE: There is no Group 3 rate to Wichita, Kans.

Coming Meetings

American Petroleum Institute, Mid-Continent District, Division of Production, Wichita, Kan., March 14, 15.

Society of Automotive Engineers, National Aeronautic Meeting, Washington Hotel, Washington, D. C., March 14-15.

American Petroleum Institute, Pacific Coast District, Los Angeles, Calif., March 19.

Oil Trades Assn. of New York, Annual Meeting, Waldorf Astoria Hotel, New York, N. Y., March 21.

Independent Oil Men's Assn. of N. E., 17th Annual Convention, Copley Plaza, Boston, Mass., March 28.

American Petroleum Institute, Southwestern District, Division of Production, Houston, Tex., March 28, 29.

Western Petroleum Refiners Assn., Annual Meeting, Allis Hotel, Wichita, Kans., March 31, April 1, 2.

Society of Automotive Engineers, National Transportation & Maintenance Meeting, Mellon Institute Auditorium, Pittsburgh, Pa., March 28-29.

The Michigan Petroleum Assn., Sixth Annual Convention, Detroit-Leland Hotel, Detroit, Mich., April 3-4.

American Chemical Society, Cincinnati, Ohio, April 8-12.

Armour Institute of Technology, Annual Midwest Power Conference, Palmer House, Chicago, Ill., April 9-10.

Society of Exploration Geophysicists, Annual Meeting, Stevens Hotel, Chicago, Ill., April 9-11.

Society of Economic Paleontologists and Mineralogists, Annual Meeting, Stevens Hotel, Chicago, Ill., April 11.

Petroleum Fluid Metering Conference, University of Oklahoma, Norman, Okla., April 11-12.

American Society of Mechanical Engineers, Petroleum Division, University of Oklahoma, Norman, Okla., April 12-13.

National Petroleum Association, Semi-Annual Meeting, Cleveland Hotel, Cleveland, O., April 18-19.

Pennsylvania State College, 9th Petroleum and Natural Gas Conference, State College, Pa., April 26-27.

Petroleum Industry Electrical Assn., Dallas, Tex., May 1 to 3.

American Gas Assn., Natural Gas Section, Houston, Tex., May 6-10.

American Assn. of Petroleum Geologists, Stevens Hotel, Chicago, April 10, 11, 12.

American Petroleum Institute, Eastern District, Division of Production, Columbus, O., April 11, 12.

National Petroleum Assn., 37th semi-annual meeting, Hotel Cleveland, Cleveland, O., April 18, 19.

American Institute of Mining & Metallurgical Engineers, Open Hearth Conference, Pittsburgh, Pa., April 24-26.

American Society of Mechanical Engineers, Spring Meeting, Worcester, New York, Hotel Bancroft, May 1-3.

American Institute of Chemical Engineers 32nd Semi-Annual Meeting, Statler Hotel, Buffalo, N. Y., May 13, 14 and 15.

Natural Gasoline Assn. of America, 19th annual convention, Hotel Tulsa, Tulsa, May 15, 16, 17.

International Petroleum Exposition and Congress, Tulsa, May 18-25.

American Petroleum Institute, 10th Mid-Year Meeting, Blackstone & Texas Hotels, Fort Worth, Tex., May 27-31.

Illinois-Indiana Petroleum Assn., Eighth Annual Petroleum Conference, Robinson, Ill., June 1.

Society of Automotive Engineers, Summer Meeting, The Greenbrier, White Sulphur Springs, W. Va., June 9-14.

American Society for Testing Materials, Chalfonte-Haddon Hall, Atlantic City, N. J., June 24-28.

National Lubricating Grease Institute, Annual Convention, Stevens Hotel, Chicago, Ill., Sept. 30, Oct. 1.

National Safety Congress & Exposition, Hotel Stevens, Chicago, Ill., Oct. 7-11.

Automobile Manufacturers Assn., 1940 Auto Show, New York, Oct. 12.

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CRUDE OIL MARKETS

Prices in $ per bbl. of 42 U. S. gals. at the well. A. P. I. gravity. Prices are effective as of 7 a. m. of dates as given

EASTERN FIELDS

Posted by Joseph Seep Purchasing Agency
(Effective Jan. 1, 1940, except Corning Nov. 4, 1939)

Bradford-Allegany (Penna. and N. Y.).....$2.75
Penna. Grade Oil in Southwest Penna. Pipe Lines.....$2.40
Penna. Grade Oil in Eureka Pipe Lines (West Virginia).....$2.34
Corning Oil in Buckeye Pipe Lines (Ohio)..$1.12

Posted by Other Companies

Tide Water Associated Oil Co.
Bradford-Allegany district (Penna. and N. Y.)
(Effective Jan. 1, 1940).....$2.75
*The Pennzoil Co.: (Effective Jan. 1, 1940)
Penna. Grade Oil in National Transit Lines*$2.68
*The Pennzoil Co. posts $2.68 in Cochran, Franklin, Hamilton and Doolittle, Pa. fields, prices in other lower districts range down to $2.63 per bbl. at well.

MICHIGAN

Posted by Pure Oil Co.
(Effective Oct. 9, 1939)

Midland, Midland County.....$1.02
Sherman.....$0.97
Clare-Freeman.....$0.97

Posted by Simrall Corp.
(Effective Oct. 9, 1939)

Crystal, Greendale, Porter, Vernon and Wise..$1.02
Beaverton, Buckeye, Bentley, Edenville.....$1.00
Freeman and Redding.....$0.97
Arenac.....$0.82
(Effective Nov. 1, 1939)
West Branch.....$0.85

Posted by Sohio Corp. (Michigan Division)
(Effective Oct. 9, 1939)

Allegan and Kent Counties.....$1.03
(Effective Nov. 9, 1939)
Van Buren County.....$1.03

Posted by Bay Pipe Line Corp.
(Effective Oct. 9, 1939)

Bentley and Buckeye.....$1.00
Saginaw and Wise..$1.02 Clare.....$0.76

CENTRAL STATES FIELDS

Posted by Ohio Oil Co.
(Effective June 8, 1939)

Illinois and Western Indiana.....$0.95
Illinois Basin.....$1.05

Posted by Sohio Corp.

Illinois Basin:
(Effective Oct. 21, 1939)
Salem (Lake Centralia).....$1.05
(Effective June 8, 1939)
Balance of Illinois Basin.....$1.05
(Effective Oct. 10, 1939)
Griffin (Ind.) pool, sand wells.....$0.95
Griffin (Ind.) pool, McCloskey lime.....$0.85

Posted by Carter Oil Co.
(Effective June 10, 1939)

Louden, Fayette County, Ill.....$1.05

Posted by Ashland Oil & Transportation Co.
(Effective June 9, 1939)

Somerset Oil in Ashland Lines, Kentucky:
Big Sandy River...$1.02 Kentucky River...$1.10

Western Kentucky

Posted by Sohio Corp.
(Effective June 9, 1939)

Birk City Area.....$0.90

Posted by Owensboro-Ashland Co.

Owensboro Area.....$1.00
Corydon Area (Henderson).....$0.90

CANADIAN FIELDS

Posted by Imperial Oil Limited
Western Ontario
(Effective Nov. 6, 1939)

Petrolia.....$2.10 Oil Springs.....$2.17

Alberta Turner Valley
(Prices f.o.b. field tankage)
(Effective Jan. 5, 1938)

Crude Oil			
40-40.9°	$1.14	53-53.9	$1.40
41-41.9	1.16	54-54.9	1.42
42-42.9	1.18	55-55.9	1.44
43-43.9	1.20	56-56.9	1.46
44-44.9	1.22	57-57.9	1.48
45-45.9	1.24	58-58.9	1.50
46-46.9	1.26	59-59.9	1.52
47-47.9	1.28	60-60.9	1.54
48-48.9	1.30	61-61.9	1.56
49-49.9	1.32	62-62.9	1.58
50-50.9	1.34	63-63.9	1.60
51-51.9	1.36	64-64.9	1.62
52-52.9	1.38		

Crude Naphtha, 65 grav. & above.....$2.14
Absorption Gasoline
90% Rec., 20 lb. Reid v.p.....$1.94
90% Rec., 17 lb. Reid v.p.....$2.08

MID-CONTINENT—Oklahoma-Kansas

*(For effective dates, see footnote)

	S. O. Indiana	Carter Mag-nolia Shell	Conti-nental Texas Co.	Sin-clair Prairie
Below 21°	$0.70	$0.60	....	....
21-21.9	.72	.63	....	....
22-22.9	.74	.66	....	....
23-23.9	.76	.69	....	....
24-24.9	.78	.72	....	....
25-25.9	.80	.75	....	$0.58
26-26.9	.82	.78	....	.63
27-27.9	.84	.81	....	.68
28-28.9	.86	.84	$0.86	.73
29-29.9	.88	.87	.88	.78
30-30.9	.90	.90	.90	.82
31-31.9	.92	.92	.92	.86
32-32.9	.94	.94	.94	.90
33-33.9	.96	.96	.96	.96
34-34.9	.98	.98	.98	.98
35-35.9	1.00	1.00	1.00	1.00
36-36.9	1.02	1.02	1.02	1.02
37-37.9	1.04	1.04	1.04	1.04
38-38.9	1.06	1.06	1.06	1.06
39-39.9	1.08	1.08	1.08	1.08
40 & above	1.10	1.10	1.10	1.10

*Effective in 1938 by Carter Oil, Oct. 13, posting in Okla. only; Continental Oil, Oct. 11, with lowest grade below 29; Magnolia, Oct. 12, posting in Okla. only; Shell, Oct. 22; S. O. Indiana, Oct. 17; The Texas Co., Oct. 12. Aug. 31, 1939, by Sinclair-Prairie.

North-North Central and Central Texas

*(For effective dates, see footnote)

	Stano-lind	Sinclair Texas Co. Conti-nental Magnolia
Below 21°	$0.60	....
21-21.9	.62	....
22-22.9	.64	....
23-23.9	.66	....
24-24.9	.68	$0.79
25-25.9	.70	for
26-26.9	.72	oil
27-27.9	.74	below
28-28.9	.76	29°.
29-29.9	.78	.81
30-30.9	.80	.83
31-31.9	.82	.85
32-32.9	.84	.87
33-33.9	.86	.89
34-34.9	.88	.91
35-35.9	.90	.93
36-36.9	.92	.95
37-37.9	.94	.97
38-38.9	.96	.99
39-39.9	.98	1.01
40 & above	1.00	1.03

*Effective Oct. 11, 1938 by Continental, in North Tex.; Oct. 12, 1938, by Texas Co. in North & North Central Texas. Texas Co.'s lowest grade is 28-28.9, at $0.79; by Magnolia, Dec. 3, 1938, in N. and N. Central Texas; Oct. 5, 1939 by Sinclair Prairie in Mexia and N. Cent. Texas.

Jefferson County, Texas—Beaumont

(Posted by Magnolia Petroleum Co., Effective Oct. 2, 1939, and by Stanolind Oil & Gas Co., for West Beaumont, Effective Oct. 2, 1939)

Below 20°	$0.86	30-30.9	$1.08
20-20.9	.88	31-31.9	1.10
21-21.9	.90	32-32.9	1.12
22-22.9	.92	33-33.9	1.14
23-23.9	.94	34-34.9	1.16
24-24.9	.96	35-35.9	1.18
25-25.9	.98	36-36.9	1.20
26-26.9	1.00	37-37.9	1.22
27-27.9	1.02	38-38.9	1.24
28-28.9	1.04	39-39.9	1.26
29-29.9	1.06	40 & above	1.28

TEXAS FIELDS

Posted by Humble Oil & Refining Co.

West Central Texas
(Effective Aug. 11, 1939)

24-24.9	$0.71	33-33.9	$0.89
25-25.9	.73	34-34.9	.91
26-26.9	.75	35-35.9	.93
27-27.9	.77	36-36.9	.95
28-28.9	.79	37-37.9	.97
29-29.9	.81	38-38.9	.99
30-30.9	.83	39-39.9	1.01
31-31.9	.85	40 & above	1.03
32-32.9	.87		

*Includes Brown, Callahan, Coleman, Comanche, Eastland, Fisher, Haskell, Jones, Shackelford, Stephens, Throckmorton and Young Counties.

Effective Aug. 29, 1939, Shell posted in Fisher county, Tex., prices 3c lower than Humble's West Central Texas prices; Shell's schedule begins with below 25, at $0.68 and ends with 40 & above, at $1.

Note: Effective Oct. 1, 1937, Humble prices are based on 100% tank tables at 60F.

East Central Texas
(Effective Aug. 11, 1939)

23-23.9	$0.78	32-32.9	$0.96
24-24.9	.80	33-33.9	.98
25-25.9	.82	34-34.9	1.00
26-26.9	.84	35-35.9	1.02
27-27.9	.86	36-36.9	1.04
28-28.9	.88	37-37.9	1.06
29-29.9	.90	38-38.9	1.08
30-30.9	.92	39-39.9	1.10
31-31.9	.94	40 and above	1.12

Posted by Pan American Pipe Line Co.
(Effective Oct. 2, 1939)

Cayuga, Anderson county.....$0.78
*Including Anderson, Cherokee, Limestone, Navarro counties.

PANHANDLE TEXAS

	Humble (Aug. 11, 1939) Gray County	Carson Hutchin-son	Texas Co. (Oct. 2, 1939) Sweet	Sour
28-28.9	$0.72	$0.67	....	....
29-29.9	.74	.69	....	....
30-30.9	.76	.71	....	....
31-31.9	.78	.73	....	....
32-32.9	.80	.75	....	....
33-33.9	.82	.77	....	....
34-34.9	.84	.79	$0.84	$0.79
35-35.9	.86	.81	.86	.81
36-36.9	.88	.83	.88	.83
37-37.9	.90	.85	.90	.85
38-38.9	.92	.87	.92	.87
39-39.9	.94	.89	.94	.89
40 & above	.96	.91	.96	.91

Effective Aug. 31, 1939, Sinclair Prairie met Humble in Panhandle Texas. Dec. 3, 1938, Magnolia posted same schedule as Humble.

***EAST TEXAS**

By Humble, Shell, Sinclair-Prairie, Stanolind, Gulf, Magnolia, Texas Co., Tide Water-Associated $1.10
*Effective dates: Aug. 11, 1939, by Humble and Tide Water-Associated; Aug. 29, 1939, by Stanolind; Oct. 2, 1939 by Sinclair Prairie; Oct. 5, 1939 by Shell; Oct. 12, 1938, by Magnolia, Texas Co.; Oct. 13, 1938, by Gulf.

*Includes Cherokee, Gregg, Rusk, Smith and Upshur counties.

Posted by Shell Oil Co., Inc.
(Effective Oct. 5, 1939)

Polk County, Tex. (Livingston and Schwab-Wilcox areas).....$1.10

NORTHEAST TEXAS

(Posted by Humble, Oct. 2, 1939)

Talco.....$0.65

(Posted by Magnolia, Oct. 12, 1938)

Cass County and Panola County, Tex.:
Magnolia posts below 25° at $0.73, plus 2c differential for each degree, to top grade of 40 & above, at $1.05.

(Posted by The Texas Co., Oct. 12, 1938)

Cass County.....$1.05

WEST TEXAS and NEW MEXICO

(a) (For effective dates, see footnote)

	Humble	Stano-lind	Shell	Texas Co. Sinclair (c)
Below 20°	$0.53	....	$0.53	....
20-20.9	.55	....	.55	....
21-21.9	.57	....	.57	....
22-22.9	.59	$0.67	.59	....
23-23.9	.61	for	.61	....
24-24.9	.63	oil	.63	....
25-25.9	.65	Below	.65	$0.65
26-26.9	.67	26°.	.67	.67
27-27.9	.69	.69	.69	.69
28-28.9	.71	.71	.71	.71
29-29.9	.73	.73	.73	.73
30-30.9	.75	.75	.75	.75
31-31.9	.77	.77	.77	.77
32-32.9	.79	.79	.79	.79
33-33.9	.81	.81	.81	.81
34-34.9	.83	.83	.83	.83
35-35.9	.85	.85	.85	.85
36-36.9	.87	.87	.87	.87
37-37.9	.89	.89	for	for
38-38.9	.91	.91	oil	oil
39-39.9	.93	.93	36° &	36° &
40 & above	.95	.95	above.	above.

Posted by Magnolia Petroleum Co.
(Effective Oct. 12, 1938 in West Texas; Oct. 15, 1939 in Lea County, N. Mex.)

	West Texas	N. Mex.		West Texas	N. Mex.
Below 25	$0.63	$0.63	33-33.9	$0.81	$0.81
25-25.9	.65	.65	34-34.9	.83	.83
26-26.9	.67	.67	35-35.9	.85	.85
27-27.9	.69	.69	36-36.9	.87	.87
28-28.9	.71	.71	37-37.9	.89	for
29-29.9	.73	.73	38-38.9	.91	oil
30-30.9	.75	.75	39-39.9	.93	36 &
31-31.9	.77	.77	40 & over.	.95	above
32-32.9	.79	.79			

Note: Magnolia's West Texas postings are in Crane, Glasscock, Howard, Mitchell, Upton and Winkler counties.

Pecos County, West Texas
(Posted by Humble Aug. 11, 1939 and Shell, Aug. 29 '39)

Pecos.....$0.78
Yates Shallow Pool (Shell only).....65

Posted by Sinclair Prairie Oil Marketing Co.
(Effective Aug. 31, 1939)

Eddy county, N. Mex.....$0.77

(a) Effective Aug. 11, 1939 by Humble; Shell Oil, Aug. 29, 1939; by The Texas Co., Oct. 12, 1938; Stanolind, Aug. 29, 1939; Sinclair Prairie, Aug. 31, 1939.
(c) Texas Co. posts $0.65 for below 26; Sinclair Prairie, $0.63 for below 25.
Note: Humble's postings are in these counties: Andrews, Crane, Crockett, Ector, Gaines, Glasscock, Howard, Reagan, Upton, Winkler and Yoakum, West Texas; and Lea county, N. Mex.; Shell, in Crane, Ector, Glasscock, Howard, Upton, Winkler, Yoakum, Lea; Stanolind in Hendrick and Henderson field, Winkler county; Texas Co. in Ward, Winkler and Lea.

Posted by Continental Oil Co.
(Effective Oct. 11, 1938)

Artesia, Jackson and Maljamar pools, New Mexico; gravity schedule beginning with below 29, at $0.61; 29-29.9, at $0.63; plus 2c differential for each gravity, up to 40 & above, at $0.85.

COLORADO

Posted by Continental Oil Co.
(Effective Oct. 11, 1938)

Ft. Collins and Wellington

Below 29	$0.81	35-35.9	$0.95
29-29.9	.83	36-36.9	.97
30-30.9	.85	37-37.9	.99
31-31.9	.87	38-38.9	1.01
32-32.9	.89	39-39.9	1.03
33-33.9	.91	40 & above	1.05
34-34.9	.93		

Canon City and Florence, Col.....$0.90

SOUTH AND SOUTHWEST TEXAS

All Shown Below Posted by Humble Oil & Refining Co.
(Effective Aug. 11, 1939)

Carroll, Clark, Darst Creek, Hilbig, Salt Flat and Zoboroski crudes.....$0.96
Van crude.....$0.93
Conroe.....$1.27

(Effective Oct. 2, 1939)

Flour Bluff and Jim Wells County.....$1.23
(Effective Sept. 14, 1939)
Hardin, Liberty county.....$1.10

Oct. 12, '38, Magnolia posted $0.96 in Darst Creek; $0.87 in Luling; $0.99 in Lytton Springs; $1.14 for Cleveland, and $1.02 in Hardin, both in Liberty county, Tex.

Oct. 12, '38, The Texas Co. posted $0.96 in Darst Creek.

(Continued on next page)

CRUDE OIL MARKETS *(Continued from preceding page)*

***Anahuac-Dickinson**
(Effective Oct. 2, 1939)

Below 20°	$0.81	30-30.9	$1.03
20-20.9	.83	31-31.9	1.05
21-21.9	.85	32-32.9	1.07
22-22.9	.87	33-33.9	1.09
23-23.9	.89	34-34.9	1.11
24-24.9	.91	35-35.9	1.13
25-25.9	.93	36-36.9	1.15
26-26.9	.95	37-37.9	1.17
27-27.9	.97	38-38.9	1.19
28-28.9	.99	39-39.9	1.21
29-29.9	1.01	40 & above	1.23

*Anahuac-Dickinson includes Cedar Point, Fairbanks, Gillock, Hull, Pierce Junction and Raccoon Bend (shallow sand) and Turtle Bay.

Raccoon Bend (Deep sand crude) Tomball and Satsuma
(Effective Aug. 11, 1939)

22-22.9	$0.95	32-32.9	$1.15
23-23.9	.97	33-33.9	1.17
24-24.9	.99	34-34.9	1.19
25-25.9	1.01	35-35.9	1.21
26-26.9	1.03	36-36.9	1.23
27-27.9	1.05	37-37.9	1.25
28-28.9	1.07	38-38.9	1.27
29-29.9	1.09	39-39.9	1.29
30-30.9	1.11	40 & above	1.31
31-31.9	1.13		

Dec. 3, 1938, Magnolia posted above price and gravity schedule in Tomball. Effective Aug. 29, 1939, Stanolind met Humble in Tomball, except that Stanolind's schedule begins with below 29 at $1.07.

LOUISIANA-ARKANSAS
Posted by Standard Oil Co. of Louisiana
(†) (For effective dates, see footnote)

	*N. La.-Ark. Sweet	Bunkie-Eola, La.	*South La. Sour	*Ark. Sour	Baton Rouge-University
Below 20°					$0.79
20-20.9	$0.73	$0.83	‡$0.74	$0.63	.82
21-21.9	for	for	.77	for	.85
22-22.9	oil	oil	.80	oil	.88
23-23.9	Below	Below	.83	Below	.91
24-24.9	25°.	25°.	.86	25°.	.94
25-25.9	.75	.85	.89	.65	.97
26-26.9	.77	.87	.92	.67	1.00
27-27.9	.79	.89	.94	.69	1.02
28-28.9	.81	.91	.96	.71	1.04
29-29.9	.83	.93	.98	.73	1.06
30-30.9	.85	.95	1.00	.75	1.08
31-31.9	.87	.97	1.02	.77	1.10
32-32.9	.89	.99	1.04	.79	1.12
33-33.9	.91	1.01	1.06	.81	1.14
34-34.9	.93	1.03	1.08	.83	1.16
35-35.9	.95	1.05	1.10	.85	1.18
36-36.9	.97	1.07	1.12	.87	1.20
37-37.9	.99	1.09	1.14	.89	1.22
38-38.9	1.01	1.11	1.16	.91	1.24
39-39.9	1.03	1.13	1.18	.93	1.26
40 & above	1.05	1.15	1.20	.95	1.28

(Effective Aug. 30, 1939)

Smackover, Ark.	$0.73
Cotton Valley Distillate	$1.20

*N. La.-Ark. Sweet includes Caddo, Cotton Valley, Cross Lake, De Soto, Haynesville, Homer, Rodessa, Sabine and Sligo, La. crudes, and Miller county, Ark. S. La. Sour includes Choctaw, Darrow, N. Crowley, Roanoke and St. Martinsville. S. Ark. Sour includes Buchner, Magnolia and Village pools.

‡N. La.-Ark. Sweet crude and S. La. Sour effective Aug. 30, 1939, except Cross Lake, La., Sept. 7, Baton Rouge-Univ., Sept. 11, and Bunkie and Eola, Oct. 23, 1939; and Ark. Sour, Sept. 13, 1939.

†For Below 21°.

Effective Sept. 8, 1939, Gulf Refg. Co. met S. O. La's. N. La.-Ark. Sweet prices in Bull Bayou, Caddo, Crichton, De Soto, Haynesville, Homer, and El Dorado.

Posted by Arkansas Fuel Oil Corp.
(Effective Jan. 23, 1937)

Urania, La.	$1.02

Posted by Continental Oil Co.
(Effective Oct. 11, 1938)

Tepetate and Ville Platte, La.	$1.03

(Effective Jan. 1, 1939)
Abbeville, La.

Below 36	$0.92	38-38.9	$0.98
36-36.9	.94	39-39.9	1.00
37-37.9	.96	40 & above	1.02

Posted by Caddo Crude Oil Purchasing Corp.
(Effective Aug. 14, 1939)

Allison area, Shreveport field	$0.95

Lisbon, N. La.
(Effective Sept. 14, 1939)

27-27.9	$0.66	32-32.9	$0.76
28-28.9	.68	33-33.9	.78
29-29.9	.70	34-34.9	.80
30-30.9	.72	35 & above	.82
31-31.9	.74		

Lisbon prices met by Gulf, Sept. 14.

Note: S. O. Louisiana prices in all La.-Ark. fields, effective Oct. 5, 1938, are on 100% tank table basis.

GULF COASTAL FIELDS
(a) **(For effective dates, see footnote)**

	Continental Humble Sinclair Stanolind	Refugio Crude (Humble, Continental)	Texas Co.	Shell
Below 20	$0.86	$0.91	$0.86	(b)$0.79
20-20.9	.88	.93	.88	.81
21-21.9	.90	.95	.90	.83
22-22.9	.92	.97	.92	.86
23-23.9	.94	.99	.94	.89
24-24.9	.96	1.01	.96	.92
25-25.9	.98	1.03	.98	.95
26-26.9	1.00	1.05	1.00	.98
27-27.9	1.02	1.07	1.02	1.00
28-28.9	1.04	1.09	1.04	1.02
29-29.9	1.06	1.11	1.06	1.04
30-30.9	1.08	1.13	1.08	1.06
31-31.9	1.10	1.15	1.10	1.08
32-32.9	1.12	1.17	1.12	1.10
33-33.9	1.14	1.19	1.14	1.12
34-34.9	1.16	1.21	1.16	1.14
35-35.9	1.18	1.23	for	for
36-36.9	1.20	1.25	oil	oil
37-37.9	1.22	1.27	34° &	34° &
38-38.9	1.24	1.29	above.	above.
39-39.9	1.26	1.31		
40 & above	1.28	1.33		

(Continued in next column

(a) Effective Oct. 2, 1939 by Continental, Humble and Texas Co.; Oct. 3, 1939 by Sinclair and Stanolind; Aug. 29, 1939 by Shell. Stanolind's lowest grade is below 21, at $0.88. Refugio, effective Oct. 2, '39 by Humble.

(b) Shell posts these prices in Iowa district, Black Bayou and White Castle, La.; prices in Iowa district have 2 lower grades: below 18, at $0.75, 18-18.9, $0.77; and 19-19.9, is $0.79.

Note: Humble's Gulf Coast prices apply in these Texas fields: Amelia, Clear Lake, Goose Creek, Mirando which includes Duval, Jim Hogg, Webb and Zapata counties and Heyser and Placedo fields; Mykawa, Sugarland, Thompsons and Webster.

Humble's prices in Refugio include crudes purchased in Saxet, East White Point, Greta, O'Connor-McFadden, Taft, Plymouth and Tom O'Connor fields.

Stanolind's prices apply in High Island and Spindletop; also in Clinton, Hastings and South Houston, where, effective Jan. 1, 1940, lowest grade is below 21° at $0.88; rest of schedule same as other Gulf Coast. Magnolia posts Mirando, effective Oct. 2, same prices as Humble. Texas Co.'s prices are in Texas and La., Gulf Coast; its prices on Refugio are same as Humble's up to 28 gravity; 28 & above, $1.09; on Duval-Mirando same as Humble's up to 28; 28 & above, $1.04; it posts Golden Meadow, La., 24-30 grav., $0.90, plus 2c differential, to 40 & above, $1.10.

Posted by Shell Oil Co., Inc.
(Effective Aug. 29, 1939)

Gibson field, Terreborne Parish, La.	$1.04

ROCKY MOUNTAIN FIELDS
Posted by Stanolind Oil & Gas Co.
(Effective Oct. 11, 1938)

Salt Creek, (except Tensleep crude), Midway and Dutton Creek, Wyo., same schedule as Stanolind posts in Oklahoma-Kansas, ranging from $0.86 to $1.10, which see under Mid-Continent crude on previous page.

Tensleep, Salt Creek field	$0.616
Hes, heavy	0.92
Elk Basin, light	0.90
Grass Creek, light	0.90
Frannie light	0.55
Grass Creek, heavy	0.40
Hamilton Dome, Wyo	0.35
Frannie heavy	0.42

Posted by Ohio Oil Co.
(Effective Oct. 11, 1938)

Elk Basin, Wyo.	$0.90	Rock Creek	1.00
Grass Creek, light	0.90	Lance Creek	0.77
Dry Creek, Mont.			0.92

(Effective May 1, 1938)

Grass Creek, heavy	$0.50

(Effective Nov. 16, 1937)

Sunburst, Mont.	$0.90

Posted by Continental Oil Co.
(Effective Oct. 11, 1938)

Cat Creek, Mont.	$1.10
Big Muddy, Wyo.	0.98
Lance Creek, Wyo.	0.77

CALIFORNIA, *Posted by Standard Oil of California*

All gravities above those quoted take highest price offered in the field. Prices effective Feb. 1, 1940

Gravity	Signal Hill (Long Beach and others*)	Seal Beach	Huntington Beach	Inglewood	Playa Del Rey	Olinda Brea Canon	Athens-Rosecrans	Torrance	Richfield	Whittier East Coyote (La Habra)	Montebello	West Coyote Hills	Santa Fe Springs	Greeley Canal	Coles Levee Richfield Western	Mountain View and others**	Elk Hills	Buena Vista Hills, Midway-Sunset, Lakeview Area	Lost Hills	Coalinga	Wheeler Ridge	Santa Maria Val. (Union Oil, Sept. 1 '39)
14-14.9	$0.65	$0.64	$0.63	$0.64	$0.65	$0.61		$0.65	$0.61	$0.61	$0.62	$0.63				$0.69	$0.60	$0.60	$0.60	$0.69		$0.42
15-15.9	.65	.64	.63	.64	.65	.61		.65	.61	.61	.62	.63				.69	.69	.60	.69	.69		.44
16-16.9	.65	.64	.63	.64	.65	.61		.65	.61	.61	.62	.63				.69	.69	.60	.69	.69		.45
17-17.9	.65	.64	.63	.68	.65	.61		.65	.61	.61	.62	.63				.69	.60	.60	.69	.69		.46
18-18.9	.65	.64	.63	.71	.65	.65		.68	.61	.61	.62	.63				.69	.69	.60	.69	.69		
19-19.9	.69	.64	.67	.75	.70	.69		.72	.61	.65	.62	.63				.69	.64	.64	.64	.61	$0.69	
20-20.9	.73	.64	.72	.79	.76	.74		.75	.65	.69	.62	.67				.69	.69	.69	.69	.62	.69	
21-21.9	.78	.64	.76	.82	.81	.78		.79	.69	.73	.62	.72	$0.63			.64	.74	.74	.74	.66	.69	
22-22.9	.82	.69	.81	.86	.86	.82		.82	.73	.77	.66	.76	.63			.68	.79	.79	.78	.70	.69	
23-23.9	.86	.75	.85	.89	.92	.86	$0.71	.86	.78	.82	.71	.81	.67			.71	.84	.84	.82	.74	.67	
24-24.9	.90	.80	.90	.93	.97	.90	.77	.89	.82	.86	.75	.85	.72			.75	.89	.89	.86	.78	.71	
25-25.9	.95	.86	.94	.96	1.02	.95	.82	.93	.86	.90	.80	.89	.77			.79	.94	.94	.90	.82	.75	
26-26.9	.99	.91	.99	1.00	1.08	.99	.88	.96	.90	.94	.84	.94	.82			.83	.99	.99	.95			
27-27.9	1.03	.97	1.03	1.04		1.03	.94	1.00	.94	.98	.89	.98	.87	$0.83	$0.92	.87	1.04	1.04	.99			
28-28.9	1.07	1.02	1.07	1.07		1.07	.99	1.03	.98		.93	1.02	.91	.86	.96	.91	1.09	1.09	1.03			
29-29.9	1.10	1.07	1.11	1.10		1.10	1.04	1.06	1.02		.98	1.06	.96	.90	.99	.95	1.14	1.14	1.07			
30-30.9	1.14	1.12	1.15	1.14		1.14	1.09	1.09			1.02	1.10	1.01	.94	1.02	.99	1.19	1.19	1.11			
31-31.9				1.17		1.17	1.14	Elwood Terrace			1.07	1.14	1.05	.98	1.06	1.02	1.24	1.24	Kettleman Hills			
32-32.9				1.20		1.20	1.19	F. o. b. ship.			1.11	1.18	1.09	1.02	1.09	1.06	1.29	1.29				
33-33.9							1.24	$1.21			1.15	1.22	1.14	1.06	1.13	1.10	1.34	1.34		$1.12		
34-34.9							1.29	1.25			1.20	1.26	1.19	1.10	1.16	1.14				1.17		
35-35.9							1.34	1.29			1.24		1.23	1.14	1.20					1.21		
36-36.9							1.39	1.33			1.28		1.27	1.18	1.23					1.25		
37-37.9							1.44	1.37			1.33		1.31	1.22	1.26					1.29		
38-38.9							1.49				1.37		1.36	1.25	1.30					1.33		
39-39.9							1.54				1.42			1.29	1.34					1.38		
40-40.9							1.59				1.46			1.33	1.37							
41-41.9											1.50			1.37	1.40							
42-42.9											1.54			1.41	1.44							
43-43.9											1.59			1.45	1.47							
44-44.9											1.63			1.49	1.51							
45-45.9											1.67			1.53	1.54							
46-46.9											1.71			1.57	1.57							
47-47.9														1.61								
48-48.9														1.64								

F.O.B. Standard Pipeline

*El Segundo prices same as Signal Hill. Wilmington prices same as Signal Hill, except below 19 gravity prices are: 14-16.9, $0.60; 17-17.9, $0.62; 18-18.9, $0.64.
**Includes Newhall, McKittrick, Kern River, Round Mountain and Kern Front, schedule for which ends with 19-19.9. Mountain View schedule begins with 19-19.9.

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New Jersey Tax Meetings Held

NEW YORK—Excessive taxation and its effects upon the petroleum and automotive industries, are now being considered in New Jersey in a series of meetings held at various cities throughout the state. These meetings are sponsored by the New Jersey Petroleum Industries Committee.

Brought out in these meetings is the fact that the average motorist in New Jersey earns an income of about $30 a week, and has the right to expect reasonable taxation. In that the average New Jersey motorist pays about $60 a year in taxes the thought has been expressed that two weeks' wages is enough to pay for the privilege of driving a car during a single year.

To date, these taxation meetings have been held in Camden, Bergen, Morris and Union counties. Men attending these meetings have shown more than an academic interest in the taxes, and have evidenced a desire to amend the state's tax program.

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Address all Blind Box Number ads to National Petroleum News, 530 Penton Building, Cleveland, Ohio, unless otherwise specified.

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Assistant Superintendent for 2500 barrel complete Pennsylvania Refinery. Chemical Engineer with experience in cracking, lubrication and wax plant operation preferred. Box No. 193.

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"STRICTLY PERSONAL"

W. D. "Pete" Hudson, Clarksville, Tenn., of Hudson Oil Co., and five-times mayor of Clarksville, is considering running for Congress in the Fifth Congressional District of Tennessee. Should he enter the race, Mr. Hudson would oppose **Joseph W. Byrns, Jr.,** for the Democratic nomination.

* * *

Mr. and Mrs. Chester Allen, Warren, Pa. (West Penn Oil Co.) are vacationing for the month of March in Jamaica, B. W. I.

* * *

M. H. (Heiny) Hindman, Butler, Pa., of Pennsylvania Refining Co., expected to get in lots of calls on a one-day business trip to Cleveland last week, but on the way over icy roads got the best of him and Heiny found himself in the ditch. "Fortunately I came out with nothing worse than a bruised leg," Heiny says, "but I didn't feel much like ringing doorbells."

* * *

Victor Ables, Nashville, of Southern Oil Service, returns to his office this week after an illness of several weeks.

* * *

A. G. "Bart" Bartlett, sales representative of Mid-Continent Petroleum Corp.'s Chicago division, is the proud papa of a son, A. G. Bartlett, III, born Feb. 7.

* * *

Edison H. Baker, formerly supervisor of sales for Quaker State Oil Refining Corp. in the Cleveland division, has been promoted to manager of Quaker State's newly-formed New York-Philadelphia district. **Jack Grant,** of Richmond, Va., succeeds Mr. Baker in Ohio, with headquarters at Columbus, Ohio.

* * *

J. D. Hensley of Cookeville, Tenn., has recently started his own company, the Hensley Oil Co. of that city.

* * *

A. E. Landsittel, sales manager for Globe Oil & Refining Co., Wichita, Kan., is recovering in an Appleton City, Mo., hospital from injuries received in an automobile accident near that town the night of Feb. 24. He was en route to St. Louis at the time to meet Mrs. Landsittel and to take her to the bedside of a sister who was critically ill.

* * *

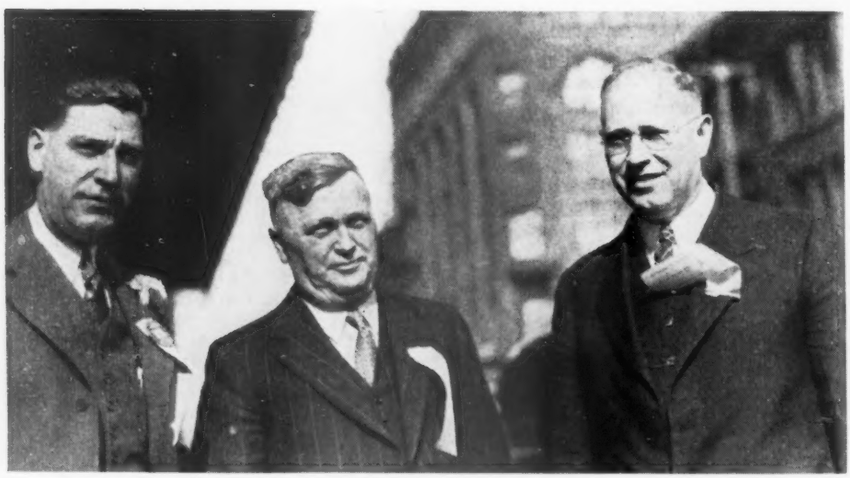
W. D. Barr, formerly with the Natural Gasoline Corp. at Arkansas Pass, Tex., has been named supervisor of butane sales in the Corpus Christi, Tex., area for Warren Petroleum Corp.

* * *

J. W. Kearney, who has been plant superintendent for Warren Petroleum Corp. at Monument, N. M., has been transferred to the company's plant at Galva, Kan., where he will be superintendent. Arnold Evans, who has been superintendent at Galva, is transferred to the Monument plant.

* * *

J. Howard Pew, president, Sun Oil Co. has been appointed chairman of the sub-committee for the oil industry in Pennsylvania's Job Mobilization Program.



Following the re-election of all four officers of the Dixie Distributors, at this organization's annual convention in Milwaukee, Feb. 20-23, the above men were photographed: From left to right, Emil R. Wallman, Milwaukee, president, Milwaukee Badger Oil Co.; P. W. Wright, Champaign, secretary, Wright-Sullivan Oil Co., both vice-presidents; C. E. Lewis, Hillsdale, executive secretary-treasurer. Sam H. Arnold, Fayetteville, Elk Oil Co., who was re-elected president, was forced to return home before this photograph was taken

C. E. Buchner, executive manager of the Independent Petroleum Assn. of America, started a new hobby on Feb. 27. He is collecting "lucky pennies" for an "educational fund" for his first grandson, **Charles Edward Buchner, III,** born at Houston, Tex., on that date. The father of Ed's grandson—**C. E. Buchner Jr.**—is Gulf coast representative for S. M. Jones Manufacturing Co.

* * *

C. W. Jones, Wewoka, Okla., having reached the age of 65 on Feb. 24, has retired as field superintendent for Stanolind Oil & Gas Co. Once superintendent at Salt Creek for the Midwest Refining Co., Mr. Jones was transferred to Oklahoma several years ago. His friends gave him a birthday party in the Masonic hall at Wewoka on his birthday.

* * *

Neil Hummel, superintendent for Barnsdall Oil Corp., has been transferred from Odessa, Tex., to Oklahoma City.

* * *

H. W. Straley, III, of the geology department of Baylor University, has returned to his duties after an attack of influenza complicated by an ear infection. His illness prevented Mr. Straley from attending the annual meeting of the American Institute of Mining and Metallurgical Engineers of which he is a member. Speaking engagements in several eastern colleges also had to be cancelled.

* * *

Several personnel changes in the Mid-Continent division of the Shell Oil Co. Inc., have been announced by **Ralph B. Roark,** vice president in charge of the division. **Reid W. Bond,** manager of production, has been given a two months leave of absence. He will make a combined business and pleasure trip to Venezuela where he will look over the operations of the Shell's subsidiaries in that country. **W. H. Morrison,** special assistant to the production manager, will be acting manager of production during Mr. Bond's absence.

Geoffrey H. Stokes, who has been assistant to the vice president in Tulsa, is being transferred to St. Louis to become assistant to **A. J. Galloway,** vice president in charge of exploratory operations.

C. M. D. Peters, formerly assistant manager of the Illinois operations for the company, with headquarters at Centralia, is being moved to Tulsa to become assistant to the vice president.

* * *

A posthumous honor was paid to the late **William L. Brunyate,** of South Orange, N. J., for many years legal counsel for the National Oil Products Co. of Harrison, N. J., by the passage of a special resolution by the company's directors. Mr. Brunyate died Dec. 26.